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WHEN THE ENGINEMAN'S VIEW OF WAYSIDE SIGNALS IS OBSCURED

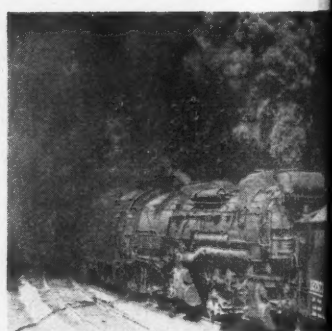


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The Week at a Glance

SPAB, A RIP VAN WINKLE: After dawdling away months of precious time, the governmental authorities who control scarce materials have agreed to loosen up enough steel to enable the car builders to turn out 12,000 freight cars in February and an equal number in March and April. At the same time, they nonchalantly announce a prediction that weekly loadings will reach the million mark in May. Well—if loadings go that high that early, the railroads will only be able to handle them by a much higher intensity of car utilization than they have ever yet demonstrated.

TIGHT SITUATION: The figures on the car supply are summarized in the leading editorial herein—in comparison with estimated loadings. With the new cars the SPAB has belatedly agreed to provide for, there should be around 1,600,000 "active" cars in railroad ownership by May 1. In October, 1941, the railroads had 1.69 "active" cars for each car loaded. To load 1,000,000 cars with only 1,600,000 "active" cars would mean a loading ratio of 1.60—to attain which, as the Englishman said, would take a bit of doing. This is not to say it can't be done, of course. Doubtless it will be, if necessary. But why should the priorities people rely on other folks and miracles to do the job they have been hired to do?

3 STEPS VS. CAR SHORTAGE: Anyhow, complaining about the boys who have dawdled the railroads' and the nation's transportation situation into what may turn out to be a tight corner, won't help get them out of the corner—any more than the Pearl Harbor inquest will win the war. What is needed now, as the leading editorial in this issue points out, is (1) assurance that the priority authorities henceforth will keep the steel coming through as fast as it is needed, (2) improved estimates on future traffic, (3) preparations to perform the near-miraculous in efficient car-handling.

ICC FEARS CAR SHORTAGE: The priorities authorities have been reported as well-meaning fellows who do not know much about transportation and who are slow to learn because they seem fearful lest somebody sell them a gold brick. Maybe, for the sake of the country's safety, they will believe the I. C. C. when it says (as it does in its annual report reviewed herein) that the railroads have been conservative in their requests for materials needed for repairs and new equipment; and that the failure of the railroads to obtain such materials in adequate quantity constitutes "the greatest and most imminent danger which threatens the provision of adequate and efficient railroad service during the remainder of the present emergency."

PLAIN TALK FROM FLETCHER: The vice-president and general counsel of the A. A. R. believes that political insist-

ence that the Transport Study Board inject itself into the interterritorial rate controversy is a disservice to the board. The appointment of Mr. Eastman to head the Defense Transportation Office meets his unreserved approbation. He believes that the man-handling the Railway Labor Act got in the recent wage negotiations has seriously weakened it as a machine for securing peace and justice in labor relations. These views were expressed in a speech, reported herein, to the Central Railroad Club.

SELLING UPPERS AGAIN: The old double-deck practice came back strong to the sleeping car market around New York over the holidays—as a report in the news pages herein reveals. If railroad ticket offices had cash registers, they would have tinkled more merrily for the last couple of weeks than at any time in many a long year. When in a jam, the public can always—and does—depend on the old reliable.

OPERATING RATIO RISING: Net railway operating income in November, as reported in the news pages herein, was less than 69 million dollars, whereas it was almost 72 millions in October, 1940—this in spite of an increase of 22 per cent in gross revenues. Which gives a rough idea of what the wage increase and higher taxes are doing to railroad earnings and, at that, the full wage increase at the "mediated" level did not go into effect until December. The operating ratio was over 73 in November, as compared to 70 in October and only 64 in September. Very much of this would be too bad, and it will probably keep on until and unless a rate increase is forthcoming.

PHOTO-ELASTIC TESTING: Rail joints today give less trouble than they did ten years or so ago because the strength in them has been shifted around to the spots where it is most needed. Testing has been the method by which design improvements have been perfected, and photo-elastic tests, described in an article herein, have been especially productive. Service testing is slow and duplicating service conditions in a laboratory is both expensive and time-consuming. The photo-elastic method saves both time and money—but it too has its problems, as the discussion discloses.

OPPOSES ICC MOVE: Director Eastman of the Office of Defense Transportation told a House committee this week that moving the Commission out of Washington would be a great mistake. The regulatory body has important defense functions and it needs to be handy where it can be consulted by defense agencies. Also, unlike most other government agencies, the Commission reports to Congress and it ought to be where it is easily available to its bosses. Besides, the law says the Commission must maintain its headquarters in Washington.

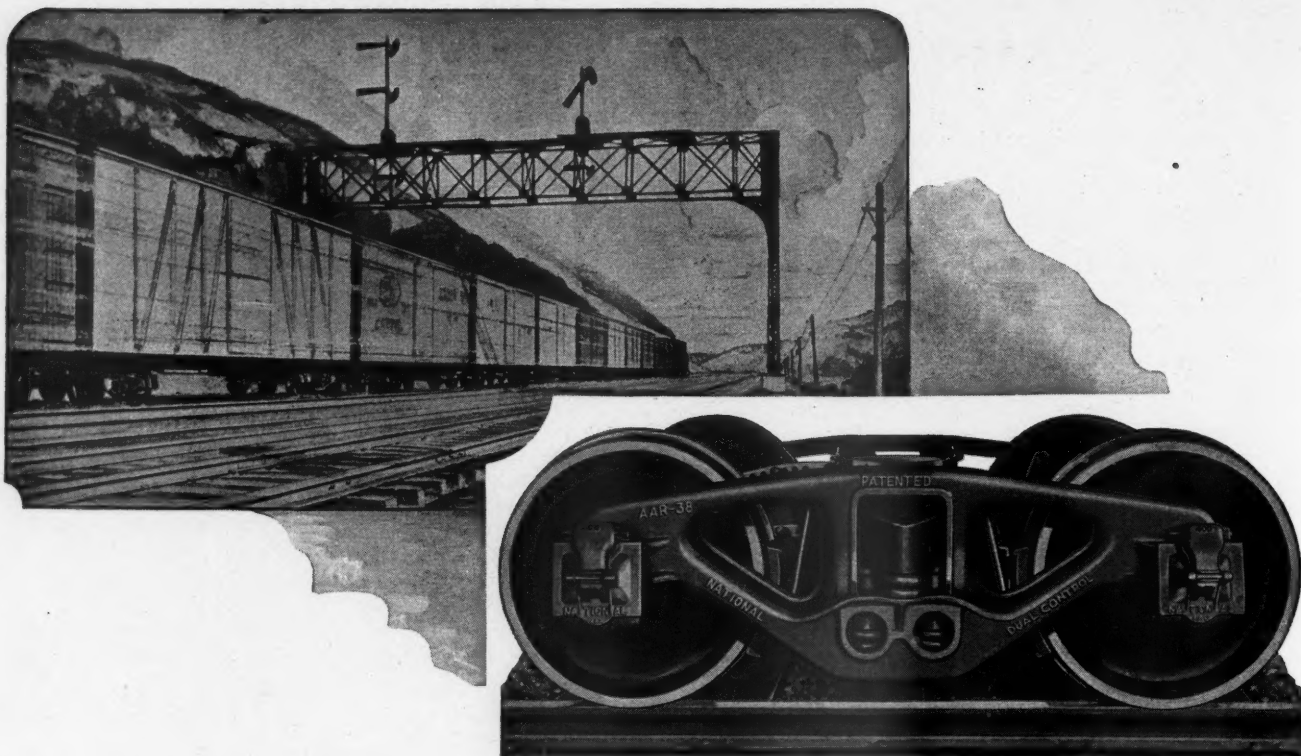
WHAT KILLS OFF BRANCHES: Hat in hand, the Kansas Commission has appealed to the chiefs of the transportation brotherhoods to rescind their decree that five men must be used on the LeRoy-Madison branch of the Missouri Pacific, insistence upon which has made the losses from operating the line so great that it must be abandoned. The Kansas Commissioners point out to the union leaders that the state has lost 1,000 miles of line, or 10 per cent of its railway mileage, in the last ten years and, unless the labor leaders relent, the process will continue. Branch lines, the Kansans contend, could easily be operated at half the present expense if arbitrary rules were rescinded.

42,284,927 CARS: This was the 1941 total of loadings in the United States. It represented an increase of 16.3 per cent over 1940 and was the highest figure attained since 1930. The revenue ton-miles showing, of course, was much better than that—because the carloads are moving further now than they did then.

SHOPPING OF LOADED CARS: One out of every 40 loaded cars interchanged at Chicago was shopped for repairs ten years ago, when a program was inaugurated to curtail this service-disrupting practice. The ratio has since been reduced to one in 130, but there is lots of room for further improvement. Timely and practical advice on this aspect of the vital subject of more efficient freight car utilization is given in a paper in these pages by Superintendent Nelson of the Chicago Interchange Bureau.

TERRITORIAL RATES: The Transport Study Board has retained Professor D. Philip Locklin of the University of Illinois to conduct its study of interterritorial rates, which was insisted upon by certain Southern statesmen before they would grant funds to permit the research work to go on. The Board explained that Professor Locklin's study would concern itself with broad principles so as not to conflict with the more detailed weighing which this question is getting at the hands of the I. C. C.

"GUN-BARREL VISION": Government bureaus in Washington tend to be infested with fellows who look down a gun-barrel and "see nothing but the little problem at the end of the bore down which they are looking." So said Senator Gillette of Iowa in expressing his distaste for a recent consent decree which mitigated federal interference with the profitable relations between oil companies and the pipe lines they own. The Senator never painted a truer picture than that of the fellow looking down the gun-barrel. Unfortunately, however, the disease isn't confined to the District of Columbia. Your observer could nominate some others for the gun-barrel club. How, for instance, about the alleged "free enterprise" fellows who favor toll-free canals and superhighways?



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Cooperate Now to Prevent Transportation Shortage

The first action taken by SPAB to assist the railroads to secure the equipment that will be required to meet the prospective increases in traffic during 1942 authorized the Office of Production Management to grant priorities for the construction of 36,000 freight cars during the months of February to April, inclusive. Including the 9,000 freight cars deliveries of which are expected during January, this will add 45,000 new cars to the supply which will be available in May, at which time SPAB anticipates that loadings will reach one million cars a week. If there should be no retirements between now and May—admittedly a very extreme assumption—this should provide a supply of nearly 1,720,000 railroad-owned cars, of which slightly more than 1,600,000 may be expected to be active. That would be 80,000 less cars than the railroads have planned to own on October 1, 1942.

(In this connection, some explanations should be made for the reader who is not technically informed regarding freight car supply and performance. First, figures for freight car supply—usually referred to as “cars on line”—may be only for railroad-owned cars, of which there are now about 1,675,000, or may include also privately-owned cars, of which there are about 245,000. The statistics used in this discussion are based only on railroad-owned cars. Second, “active” cars exclude “surplus” cars and those in bad order—that is, are the number actually used during any given period in loading, unloading and moving freight).

Prospective 1942 Traffic and Transportation Capacity

In last week's *Railway Age*, in a discussion of the prospective freight car situation, an increase in carloadings of 10 per cent in 1942 over 1941 was assumed, which, it was estimated, would provide for an increase of 14 per cent in tons carried one mile. Maximum weekly carloadings in May, 1941, were 866,000. Therefore, an increase of 10 per cent would make maximum weekly loadings next May 953,000—less than the million anticipated by SPAB, but 30,000 larger than peak loadings last October. There was not the usual seasonal increase in loadings last year between May and in October. A normal seasonal increase is 12 per cent; but

last year the increase from the maximum week in May to the maximum week in October was only 6½ per cent.

The difference was due to the fact that normal seasonal increases and decreases occur in commercial traffic; and throughout last year the freight carried was more and more rapidly becoming defense traffic. No doubt the same thing will be even more true throughout 1942. Consequently, the trend of loadings in 1942 is unprecedentedly difficult to forecast. The increase from May to October may be relatively no larger than last year. But in view of the huge estimates being made of production for war in 1942 it seems not improbable that, if loadings should reach a million cars weekly before the end of the first half of the year, their increase in the entire year would somewhat exceed 10 per cent, and that loadings in the fall would become substantially larger than a million a week.

Looking Ahead to 1943

And while considering the supply of transportation, we must look much farther ahead than even next October—as the railroads represented by the Association of American Railroads already have done by planning for an increase of 150,000 in the car supply between October 1, 1942, and 1943. According to the government's own estimates there will continue to be a huge increase in demand for production as long as the war lasts. That means continuance of a corresponding increase in demand for transportation far beyond next October, provision for meeting which cannot be delayed. Large numbers of locomotives and cars cannot be ordered and built overnight; and, therefore, ordering and providing for the building of those that will be needed, not only after next May, but also after next October, should be expedited as much as practicable.

However, whatever increase in excess of 10 per cent in carloadings there may be in 1942 will be no more than may be expected to result from the extensive conversion of industrial operations to the seven-day week; and, as pointed out in the article already referred to (*Railway Age*, January 3, page 4) the increase in loading and unloading days will add to effective car-days, and probably will cause relatively little additional strain

on a supply of cars sufficient to meet the demands of a six-day week. On that assumption, let us consider what supply of freight cars may be expected to be required in 1942.

Demanding Unprecedented Transportation Efficiency

During the four highest weeks of last fall's peak traffic, car performance was such that there were 1.81 cars on line per car loaded weekly, of which 0.08, or 4.3 per cent, were in bad order and 0.04 were surplus, leaving 1.69 that were actually "active" in moving traffic. It cannot be reasonably assumed that the percentage of cars in bad order can be further reduced. Therefore, the foregoing ratios indicate that for loading a million cars a week, there would be required 1,690,000 "active" cars, plus 80,000 in bad order—a total of 1,770,000. Allowing for no surplus whatever, this is 50,000 more than the most extreme estimate that can be made of the number that, under the SPAB program, will be available in May.

The foregoing ratios indicate that an average of 12.6 days per trip were required by each car loaded, of which only about 1.8 days were spent by the car moving in trains, and over 10.8 days were spent (1) in yards and terminals, (2) in the hands of shippers and consignees for loading and unloading, (3) in being out of service for repairs, and (4) in standing idle as a part of the car surplus. The latter two categories, which constitute the time out of active service, amounted to approximately 0.8 day, leaving about 10 days on the average that each car was in the hands of shippers and in the hands of the railroads while not moving in trains. To provide for a one-million-car week with the 45,000 additional cars expected to be available next May—assuming in the meantime no car retirements—would call for a reduction in the average load-trip time of about two-thirds of a day, practically all of which would have to come out of the 10 days spent in yards and terminals and in the hands of the shipper.

Under normal conditions, it is probable that no such decrease could be effected. With a lengthened work-week and the extent to which shippers may be expected to co-operate with the railroads under war-time conditions, it may well be within the possibilities. It would, however, represent an intensity and efficiency of car utilization which has never yet been attained; and, after the great increase in car efficiency already accomplished, it would obviously be hazardous to rely for an adequate car supply on such a further increase of efficiency.

Other Shortages Versus Transportation Shortage

The specious argument has been advanced that, since there are tremendous shortages and necessary use of priority orders in almost everything else, what would be so harmful about a few shortages and some use of

priority orders in railroad transportation? The answer is that a **transportation shortage would compound all the other shortages.** This observation applies with equal force to both military and civilian goods. The necessity for prompt and efficient transportation in the case of war supplies is obvious—not only of the finished products, but of the raw and semi-processed materials which go into their manufacture. But what about goods for civilian consumption? The fact is, that the supply of many such goods is going to be so severely curtailed by direct government action that any further deprivation of consumers (occasioned, perhaps, by a transportation shortage, if one should occur) might indirectly react harmfully on the military effort.

Take automobile tires for instance, the supply of which even for essential civilian uses is going to be drastically curtailed. What if the microscopic civilian supply of this commodity were further diminished by delays in transportation? Obviously, the resulting deprivation would hinder, even if indirectly, civilian movements which have a bearing on the war effort.

Why Transportation Must Meet Both Civilian and Military Needs

If we are going to spend half the national income on the war, then the remaining half of that income in the hands of private citizens will constitute almost an irreducible minimum of goods and services to enable them to produce efficiently that part of the national income which is destined for the war effort. With the national economy in such a situation as this, a shortage of transportation for civilian goods might have, indirectly, almost as serious an effect on the efficiency of the war machine as a slow-down in the movement of military goods themselves.

It is apparent from his public statements that Director Eastman of the Office of Defense Transportation is fully cognizant of the particular undesirability of a transportation shortage—even for civilian goods—and for reasons which are substantially those outlined above. Ralph Budd on several occasions, when he was Defense Transportation Commissioner, expressed a similar view of the problem—especially in his concept of the "balance" between production and transportation, and the necessity of advancing transportation capacity at the same pace at which total production is advanced. **Transportation is not a separate commodity,** but an integral part of all other commodities. Transportation capacity cannot, therefore, be dealt with successfully as other scarce commodities are dealt with—by priorities and allocations. If a transportation shortage develops, all the calculations which are being made by OPM, SPAB and other governmental authorities relative to the production of all commodities will go awry.

Do SPAB and OPM recognize this essential difference between the supply of **transportation**, and the supply of **materials** with which they have to deal?

In view of the long months of dilly-dallying which they did before coming to any effective decision to improve the freight car supply situation, it seems doubtful that they have such understanding. If they do not, then it will certainly be one of Mr. Eastman's most pressing and important duties to endeavor to impart it to them.

Another thing—the advance forecasts which were made of railroad traffic a year ago did not turn out very well. The railroads this year are probably going to be pressed much nearer to their capacity performance than they were in 1941—hence traffic estimates which fall considerably short of the actual development are going to be much more embarrassing this year, if they occur, than they were in 1941. How can the accuracy of these estimates be improved? We are not familiar with the methods employed by the estimators whose conclusions are accepted as official, but we have seen estimates made by individual railroads of their own 1941 traffic which came much closer to the bull's eye than did those of any of the forecasters who were doing business on a nationwide basis. Perhaps if inquiry were made into the technique employed by some of the individual carriers who shot somewhere near par in

1941, the reliability of the nation-wide estimates might be checked and thereby improved.

How to Prevent Transportation Shortage

There is no job ahead of the railroads today so important as that of becoming prepared to handle coming traffic without serious delay. If trouble develops, the blame will rest squarely on the shoulders of the priorities authorities who dawdled so long about allocating the materials necessary to assure an adequate supply of railway rolling stock. But, putting the finger on those at fault will not win the war; and they are as likely as not to shift the blame to the shoulders of others. What needs doing now is this:

1. To make sure that the priorities authorities be brought now to a recognition of the essential difference between transportation shortage and shortage of scarce commodities, and influenced henceforth to do their full part, as they have persistently neglected to do up until the present, to forestall transportation shortage.

2. To improve, insofar as humanly possible, the reliability of advance estimates on railroad traffic.

Rate Increases and Competition

Traffic Vice-President Walter Franklin of the Pennsylvania, appearing in 1940 before a Senate Interstate Commerce sub-committee on S. 146, the forwarder bill, testified in part as follows:

"The main cause for the tremendous loss in less-carload traffic has been the failure of the railroads to adjust themselves to changing economic conditions. They have continued to rely too heavily on the principle what the traffic will bear which characterized rate-making in the past, when it was obvious the situation was changing.

"Another factor has been the high level of l. c. l. rates, which increased sharply during and shortly after the close of World War I. From January, 1915, to date, the rate structure in Official Territory has been subjected to the following changes:

January 4, 1915	— 5 per cent increase
March 12, 1918	—15 per cent increase
June 25, 1918	—25 per cent increase
August 26, 1920	—40 per cent increase
July 1, 1922	—10 per cent reduction
December 1, 1931	—increased by various amounts
March 28, 1938	—10 per cent increase

"The series of increases mentioned were superimposed on each other so that, using New York to Chicago as an example, the first class rate today is \$1.67 per 100 lb., or 92 cents higher than in 1915. The increase was 123 per cent.

"Furthermore, a natural development in the evolution of the rate structure has been an undue refinement in classifications. In many instances, there are meticulous distinctions and differences in ratings according to type of package used which find no support under modern conditions.

"It is not to be wondered that the shipping public has been seeking means of escaping these high charges. As a consequence, much of the traffic has been lost to external competition. Decentralization of industry—a much dis-

cussed topic in recent times—has undoubtedly been influenced by these factors.

"We have been fully cognizant of the fact that, unless these resistances to the use of rail service are overcome, erosion of the essential revenue derived from l. c. l. traffic will continue.

"A proposal with this objective in mind is now under consideration. It provides for a general reduction on the higher rated and heavier loading l. c. l. traffic. It removes differences in ratings based on the kind of package used. It practically ignores the element of value. As an example, commodities that have a high weight density and load heavily, and now rated first or second class, would be reduced to third class. This involves thousands upon thousands of rates.

"The adjustment, in actual application, would (1) reduce the number of ratings very materially, (2) establish a more logical relationship between commodities—thus promoting simplification—and finally (3) place the railroad rates on a sounder economic basis which would naturally place the railroads in a better competitive position.

"When the proposal is made effective, the railroads will recover a substantial volume of traffic that had been lost for reasons described. With this recovery will come greatly improved service, particularly to smaller communities. Greatly improved service will draw other traffic, thus reversing the cycle that takes place when traffic is declining. And, finally, the railroads will experience increased net returns."

Now a further necessary percentage increase in rates is under consideration—and still the proposals for modernizing the l. c. l. rate structure, mentioned by Mr. Franklin more than 18 months ago, have not been put into effect. It seems even more than obvious that, if the adjustments Mr. Franklin described were desirable (as who can deny they were?) under the 1940 rate level, the need for them under the higher level now proposed will become even more imperative.

3. To take the requisite steps to improve railroad and shipper handling of cars in order to reduce the average of 10 days per load which each car now spends (as shown already in this editorial) in the hands of shippers and otherwise than in train movement in the hands of the railroads.

A transportation shortage under conditions which this nation faces in 1942 would have consequences not pleasant to contemplate. If the priorities authorities, Mr. Eastman and his staff, the railroads and the shippers will co-operate to the best of their ability and goodwill, there will be no reason for such shortage and it will not occur. But if any weakness develops in the chain of co-operating agencies which have the power (and hence the responsibility) it may occur.

Blackout Lighting

Coastal areas of the United States are now subject to bomb attack. Large-scale bombing is unlikely but token raids are not improbable. Such raids may be expected at night and one defense measure which involves everyone is "blackout" lighting.

The railroads are military targets and the first thing that railroad operators need to know about blackouts is how to avoid doing foolish things. Early reports from London disclosed that more pedestrian deaths resulted from blackouts than from bombs, and London had suffered great damage from bombs.

Very low intensities of illumination on the ground (0.004 foot-candles) are not visible to the unaided eye

at heights above 5,000 feet. Bodies of water are clearly visible even with starlight alone (0.0002 foot-candles). It is, therefore, easy for planes to follow coastlines and rivers and the location of a city on the coast or an estuary is easy to find in clear weather. Blackouts of large coastal cities, therefore, mean concealing prominent targets and confusing map patterns. On the railroads it means following certain rules of dimming some lights, extinguishing some, and screening others from view overhead.

Complete rules are not yet available, but in general terms they will be about as follows: During an alarm, headlights should be extinguished. Cab lamps should be concealed or extinguished and curtains or baffles should be used to hide open fire doors. Marker and classification lights should be equipped with hoods and number case lights should be dimmed so they are barely visible at 100 feet. This can be done with two thicknesses of newspaper behind the glass.

Passenger car lights should be dimmed. Windows may be given a four-inch coating of black paint around the edge to prevent light escaping at the edges of drawn shades. Station windows and doors should be opaqued. Platform lighting fixtures should be so altered that no light is visible from above and dimmed so that the light on the ground does not exceed 0.002 foot-candles. Signal lenses should be provided with hoods and hand lanterns should be hooded or dimmed. Classification yard floodlights should be extinguished. Regular lighting should be available when the all-clear is sounded.

By the observance of such precautions, accidents may be kept at a minimum and trains can be kept moving.

"If We Eat the Seed Corn . . ."

"The steadily increasing pressure of the progressive income tax [i.e., where the rate rises as income goes up] is threatening the solvency and the economic future of the middle class, the professional and wage and salary earning groups that are not profiting from the defense boom. The tax increases made this year, intensified by retroactive application to January 1, cannot be paid out of income.

"The final effect of this kind of taxation will be enforced deferment of current expense bills, loans on insurance policies, borrowing from banks and personal finance companies, and liquidation of securities or other property. Reduction of individual net worth, however it occurs, which is caused by an unsound and unfair method of taxation and not in any degree by personal improvidence, means that the 1941 income tax will really be in part a levy on capital rather than on income.

"When we get down to the brass tacks of progressive taxation, we find that it is a device whereby the mass of the voters can compel some one else to support the government. The only good reason for it is the socialist's argument for the redistribution of wealth and income. . . .

"Progressive taxation is bad policy for two reasons:

"1. It negates or nullifies the most important force which makes a country great, which enables its citizens to prosper, and which raises the standard of living. This force is the profit motive.

"2. It is a method of impairing and depleting the capital

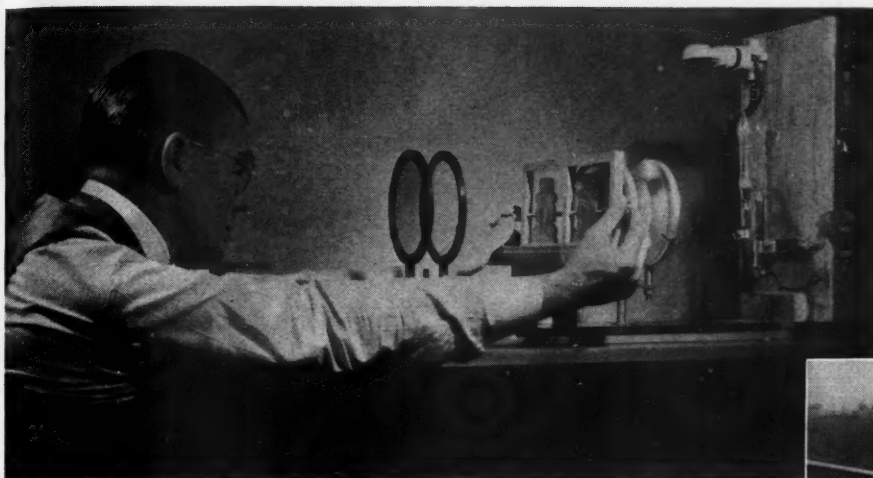
fund which can only be likened to eating the seedcorn or burning down the house to keep warm. . . .

"Some one has said that the whole subject of economics can be boiled down to one short sentence—There is no free lunch. The people have had a long and intensive course of education pointed toward the idea that the economic system will provide them indefinitely with a free lunch, a free ride and free tickets to the circus. Drastic progressive taxation does provide a free lunch, but it will last only as long as the seedcorn holds out. . . .

"As a defense of progression, it is without sense, unless it can be shown to be sensible to tear down one house merely to use the materials to erect another similar house. The result of the wrecking operation performed by the tax would be, of course, to transfer ownership of the house from private to public hands, and this is precisely what socialism is.

"We are engaged today in a process of consuming our resources at a high rate in order to strengthen the national defense. Our objective is to end aggression, but the economic and political philosophy which underlies the policy of aggression is national socialism. At bottom, therefore, we are fighting against national socialism. Yet we are traveling the road to national socialism as fast as the devil can send us. To those who abhor socialism, and who see the contribution which progressive taxation is making toward the realization of socialism, the whole doctrine of progression must appear, indeed, to be the work of the devil himself."

Professor Harley L. Lutz (Princeton University), in the N. Y. Sun, Jan. 7.



As Shown At the Left, Stress Lines in Plastic Models Under Simulated Bolting Pressures Can Be Studied Visually by Means of the Polariscope



The Polariscope — A New Aid in Rail-Joint Design*

Visual examination of stresses is made possible by device in which polarized light is passed through plastic models under simulated bolting pressures

By W. E. Gadd and H. L. Lansing

The Rail Joint Company, New York

THE primary requisite for a rail joint is that it must hold the rail ends together securely, at the same time providing take-up so that the joint may be kept tight continually as wear occurs. It must allow for expansion and contraction in the rails while offering support to the rail ends sufficient to permit a deflection in the joint as nearly equivalent as possible to that of the unbroken rail. The work that the joint bar must do is quite an assignment, especially when one considers that joints are rolled in one mill and the rails sometimes in another, while the bolts, tie plates and lock washers may come from widely separated points. Each of these integral parts is manufactured with a permissible tolerance and, when assembled in the field, they are required to fit together as a unit. Technical research by the steel mills has contributed largely to the development of the design and chemistry of rail joints; better fit and longer life are results of continued improvements in mill practices.

Basically, the joints of today are little changed from those of 25 years ago. There is no question but that rail-joint conditions are greatly improved. True, they are not perfect; indeed, they may never be so. At the same time, rail joints are not the source of trouble for maintenance men that they were a decade or more ago. In view of this condition, it would only be natural to ask what has brought this change about. The answer in part is

by refinement in design, which has resulted in the placing of the metal where it is most effective; the positioning of the bearing areas to insure better application; the minimizing of dangerous stress concentrations; and, in general, the streamlining of the joint. There are in general use two specific types of joint bars—the head contact bar and the headfree bar. Both short-base and flanged sections are available in each type.

Continuous Betterment

The service that these joint bars have given in track reflects the effort expended in their development. There is a continuous betterment taking place as design modifications are suggested by the performance of joint bars in service. After a theoretical design is approved on the basis of existing practical knowledge, it is checked for manufacturing feasibility. It is then ready for testing before being offered to the railroads. In the past we had available two practical methods of investigating new designs, the quickest of which was the laboratory test. Because it required large-capacity static loading machines, delicate strain gages and many repetitions of careful loadings, this method entailed considerable expense to be reasonably conclusive. To increase the reliability of laboratory tests a rolling load machine could be employed, but this increases the expense and also the time consumed.

The service test, entailing observation of the design in

* From a paper read before a meeting of the Metropolitan Maintenance of Way Club, New York.

track, was, of course, the most reliable. However, using this method, years were required in many cases to establish the superiority of one type of design. For a long time we have searched for a quick and reasonably inexpensive method of checking tentative designs, or at least of obtaining indications that would reduce the number of proposed variations for subjection to more exhaustive testing. We have found that photo-elasticity offers an ideal tool for this purpose. It enables us to make up models by which to check, step by step, the development under investigation. By means of a device known as the polariscope, which employs the principles of photo-elasticity, design changes can now be studied, for the modifications produce readily discernible variations in the strain pattern.

Development of the Method

A general idea of the functioning of the polariscope will enable us to interpret the photo-elastic patterns better. Photo-elasticity has developed spasmodically over the last 100 years, being based on the discovery that polarized light produced colored patterns in stressed glass. Interest was not great in this particular phenomenon for some time, partly due to the fact that the materials available, such as glass, were inferior and difficult to work. The propagation of polarized light depended mainly on Nicol prisms made from crystals of Iceland spar, which had to be specially cut and cemented. The improvement in plastic materials available for this work, and the invention of polaroid have given research work in photo-elasticity its present impetus. Polaroid discs are substituted in the modern polariscope for the Nicol prisms.

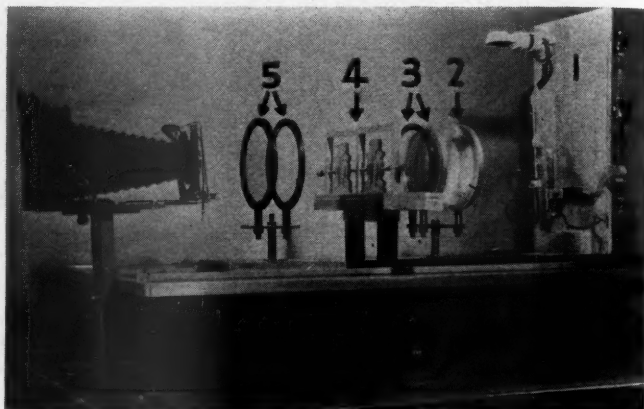
Polarized light, as utilized in this apparatus, differs essentially from ordinary light in that its vibrations are confined to a single plane while ordinary light is subject to no such limitation. When polarized light is passed through a plastic material such as Bakelite, which possesses the property of becoming doubly refractive when loaded, and observed through a second polaroid plate or analyzer, we see bands of interference in the model. These bands show a spectrum if we are using a white light, and become alternate light and dark bands if we are using monochromatic light. The number of interference bands produced is directly proportional to the strain. Therefore, a polariscope consisting principally of a source of light, a polarizer and an analyzer, with a loaded model between the plates, affords us a visual examination of the distribution of strain.

Determining Stresses

Knowing the scale relationship between the model and the prototype, we can evaluate the stress lines upon calibration of the material, which is readily accomplished by measuring a small tensile specimen. We obtain from this calibration what is known as the fringe constant, or the number by which we multiply the number of lines crossed in a model when going from a point under investigation to a known line of zero difference between the principal stresses. Thus we can obtain from two-dimensional photo-elastic models the difference in principal stresses throughout the cross section of the model and, as one of the principal stresses at the boundary is zero, we then obtain the remaining principal stress. With this knowledge it is possible to work conversely, knowing the actual deformation in a structure under investigation. A photo-elastic model can be made and loaded until the stress pattern is in accordance with the known deformation. Thus, being reasonably sure that actual conditions

are duplicated, the structure can be modified in such a manner as either to lighten it or to improve the stress distribution.

In adapting photo-elasticity as a means of studying the problems involved in rail-joint design, it is well to consider their complex nature, since they are quite unlike most of the engineering design problems in that they cannot be built up step by step by assembling the known



In This View of the Polariscope, a Camera is in Position for Taking Photographs of Models Under Stress

Numbers Indicate (1) Mercury Vapor Lamp and Rheostat; (2) Diffuser Plate and Condenser Lens; (3) Polarizer; (4) Bakelite Models in Straining Frame; and (5) Analyzer

factors. To begin with, roadbed conditions, or the modulus of elasticity of the track structure, vary appreciably. Also, rail, tie plates, and angle bars, all being of rolled steel, are subject to permissible variations. In a joint bar we are bound to encounter slight variations in angularity, plus permissible amounts of camber and bow. Due to these inequalities, the application of the joint bars to the rails produces appreciable stresses in both units of the assembly. Superimposed upon these stresses are others produced by the variable wheel loads.

Joint Design Is Complex

Without going further into detail, the complexity of rail-joint design is easily appreciated. We can compute some phases of the design mathematically; others must be developed with the aid of knowledge gained by experience. Many things have happened to, and in, rail joints that we recognized and could generally explain, but some of these are not readily understood by the average person who is not working continually with them. We have found that photo-elasticity admirably fills this breach by making it possible to demonstrate visually variations involving fit and the stresses produced upon the application of bolting pressures in cross-sectional models.

Our investigations have been confined generally to qualitative comparisons. We have made our own models out of a particular Bakelite which has proved to be an excellent plastic for this work. It is readily workable and has an optical sensitivity such that a reasonable number of lines are produced in the material within its elastic limit. It is usually annealed to eliminate casting and working stresses. To illustrate the effects of bolting and fit we use straining frames that permit the loading of two, three, or four models at one time. Pressure is transmitted from one to another by means of free sliding bars. Therefore, the models are subjected to identical simulated bolting pressures. To serve as a permanent record, photographs are taken of the strain patterns de-

veloped. From these it is always possible to duplicate a loading by recalling a stress pattern previously recorded.

Two Typical Studies

Two typical photo-elastic studies of our own designs are offered as examples. Fig. 1 shows the strain pattern developed in a 131-lb. rail and joint bars of the head-contact type. Fig. 2 is a strain pattern for a headfree joint fitting the same rail section. The joint bars modeled in Fig. 2 are 17 lb. lighter for a 36-in. joint than those in Fig. 1. The head-contact bar has a slightly higher moment of inertia, but the head modulus values of the two joints are nearly equal.

Bakelite models $\frac{1}{4}$ in. thick were used in these studies, which were annealed prior to inserting them in the same straining frame. Since the pressure was transmitted from one model to the other by a free sliding bar, we had identical simulated bolting pressures on both assemblies. The strain patterns were then photographed, as shown in Fig. 1 and Fig. 2. In Fig. 1 we have an indication of strain throughout the entire head of the rail; the accumulated lines in the head and base adjoining the web are caused by tension in the rail web. Concentrations occasioned by bearing pressures are noted at the various contacting points. The head-contact joint bars shown in this figure have been designed with flat bearing areas on both the head and base, which are meant to fish with the corresponding areas on the rail.

It is evident from these photo-elastic studies that these surfaces do not coincide. This condition is produced primarily by the tendency of the joint bars to rotate or cock, a proclivity which is difficult to overcome in this type of joint bar. This, in turn, permits an inequality in

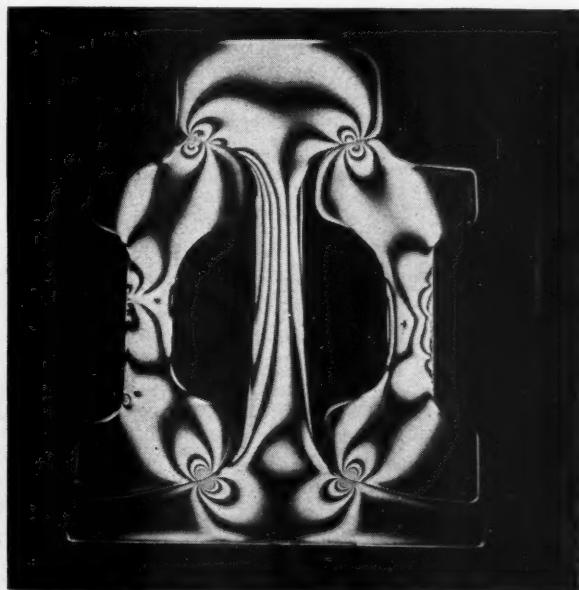


Fig. 1—Strain Pattern in 131-Lb. Rail and Head-Contact Joint Bars, as Seen in a Bakelite Model in the Polariscope

the wedging action of the two joint bars, resulting in a lateral tilt which is observed in the photo-elastic pattern as the long lines in the web of the rail. The most significant portions of the strain pattern developed are the concentrations shown in the upper bearing areas, for they occur near the apex of the joint bar, which is also the point of maximum fiber stress. We know that these factors, coupled with external damage to the bars at the rail ends, have resulted in fatigue failures in this type of fastening.

In Fig. 2, the head of the rail is almost entirely without strain. The single line at each extremity of the web shows elongation in that region. Since the upper engagement between each joint bar and the rail is at the rail fillet, the bearing areas at the heads of the joint bars are curved surfaces. The strain pattern shows local concentrations along these bearing areas but it should be noted here that they do not occur at the apex of the joint bar. The lack of bending stress in the web of the

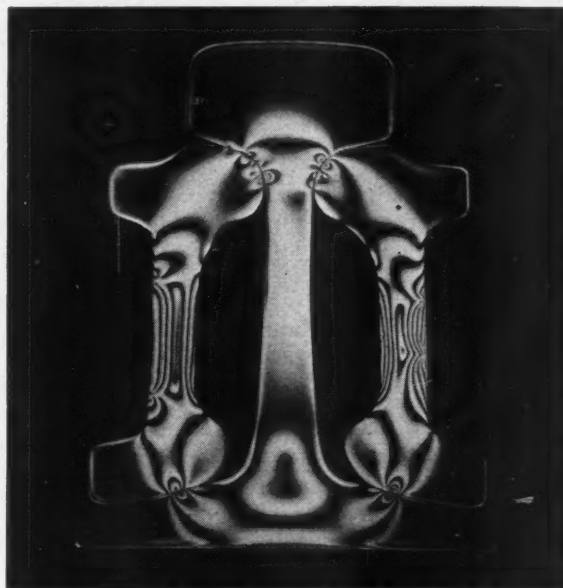


Fig. 2—Showing the Strain Pattern in 131-Lb. Rail and Headfree Joint Bars

rail in this figure testifies to the balanced bearing action of these joint bars.

Results Compared

Comparing the two strain patterns, we find that the symmetry of Fig. 2 indicates that the contacts are similarly disposed. The number of lines emanating from the contact points of the joint bars in Fig. 1 is appreciably greater than those in Fig. 2, indicating greater concentrations of bearing pressures. The proximity of these points to the extreme fiber of the joint bars in Fig. 1 illustrates the reason why this type of joint bar is more susceptible to fatigue failure than that in Fig. 2.

As a verification of this analysis, we ran a series of mechanical tests of both headfree and head-contact bars, using an assembly consisting of 36-in. joint bars bolted to a 131-lb. rail end in such a position that the joint bars were flush with one end of the rail. To permit strain-gage readings to be taken, holes were drilled in various positions in the face of the rail end. The bolts were tightened until they had become elongated 0.004 in., giving a bolt tension of approximately 19,000 lb. per sq. in. Strain-gage readings in 10,000ths of an inch were then taken between the holes. Bolt elongations of 0.007 in., the equivalent of a bolt tension of 33,000 lb., were also used to exaggerate trends.

Among the results of this test we found that the head-contact joint bars produced more stretch in the web of the rail and that maximum vertical deformations, excluding web stretch, in the head and in the base of the rail, were less for the headfree joint. This would indicate the same tendency observed in the photo-elastic test, namely, that the joint bars in Fig. 2 do not produce the lateral bending or tilt in the rail that is observed in Fig. 1.

(Continued on page 166)

Reminders for Better Railroading*

Five definite suggestions are advanced for the more expeditious handling of freight cars and getting loaded cars to destination without delay

By C. J. Nelson

Superintendent, Chicago Car Interchange Bureau

MUCH has recently been said about increased utilization of freight cars. Obviously one of the most important things we can do in accomplishing this objective is to work hard to keep such cars in condition to function more satisfactorily and carry their loads to destination without detention for repairs in transit. It was a revelation to me, as I am sure it was to many others, when C. H. Buford, vice-president of the Association of American Railroads announced sometime ago "that the average freight car is on the move only about 2½ hr. in 24, thus making its dead time, 21½ hr." This impressed me more than anything else with the fact that the carmen, by proper and united efforts must do much better toward increasing the mileage of such cars.

The information we have gathered indicates that only a small percentage of the railroads are maintaining records to show the total number of loaded cars shopped for repairs on their respective premises, and I dare say that doing so would prove highly profitable, provided, of course, it would be continually used for bringing about improvements. We have been informed that about 36 million cars were loaded with revenue freight in the United States during 1940, and, judging from our statistics, it seems certain that, aside from disarranged loads, well over one million of that number, moving in and out of interchange, were shopped for repairs.

When the Chicago roads in 1932 inaugurated a working plan to reduce the shopping of loaded cars, they found that, on the average, one of each 40 received from connecting lines had to be placed on shop tracks for repairs, and while this ratio has since been improved to one of about 130, they still feel, and rightly so, that the showing is far short of the desired goal and a stigma on railroad transportation. These figures, by the way, are based on each car making only one interchange move, although the majority are interchanged several times in passing through the Chicago gateway.

Our inspection of defective material removed from loaded cars has indicated that the defects causing shopping existed on approximately 75 per cent of the cars when or before they were last loaded, but we could not be entirely sure of more than about 50 per cent. Preventing the loading of such cars is not an easy problem to solve, but from records at hand we know, beyond doubt, that a marked improvement could be brought about if all railroads would have all empty cars inspected with the same exacting care as they do the loaded cars received in interchange. In fact, we feel that nothing better than that could be done in connection with this matter. Our records covering inspection in the Union stock yards, Chicago, indicates that at least five per cent of the empty cars passing through that point are being

carded to repair tracks on account of legitimate defects. The fact that this inspection is hurriedly made, makes it reasonable to assume that many defects are overlooked and that the average percentage throughout the United States exceeds that percentage. This information, which can be verified by anyone who cares to check it, will no doubt prove a revelation to many, and it is submitted with the hope that some well-founded plan will be developed to cull out and repair the defects on empty cars for which they are being shopped after they have been loaded.

Reduce the Shopping of Loaded Cars

Further improvements could also be made by exercising better judgment in connection with the shopping of loaded cars. While I am not at all in favor of taking chances with dangerous defects, I know that thousands of cars that could be safely handled to unloading points without repairs are being shopped, mostly through iron-clad instructions and fear of disciplinary action. This statement is based on the fact that the shopping of loaded cars in Chicago varies, by roads, from about 1 in 30 to about 1 in 600 received from connecting lines. I have carefully studied the effect of the methods used by these roads, and, therefore, fear no contradiction when I say that the roads making the better showings have experienced no more trouble with their cars after leaving Chicago, than did the other roads making the poorer showings.

My constant contact with representatives of these roads has convinced me that the car inspectors employed by roads shopping the lesser number of loaded cars are approached by their foremen in such a way that their judgments are not distorted by fear, although the foremen themselves might have been severely criticized on account of some accident, or the shopping of cars between Chicago and destination points.

Quite often executive officers issue instructions, so phrased that their subordinates do not dare to permit a loaded car received from connecting lines to be forwarded with the slightest defects, even though they know that they are safe enough to go to destination without repairs. Although discretion would be helpful, executive officers can hardly be blamed for being what might be termed curt in their demands for safety and better service, but I contend that the supervisors in direct charge of the field men should be very tactful in transmitting constructive criticism to them, so that they will continue functioning on a common-sense basis.

We know so well the excellent results obtained by the few foremen who personally make almost daily inspections of the loaded cars on their respective shop tracks to see whether or not some of them could safely have moved on to destination without repairing the defects on account of which they were shopped. They find many,

* Abstract of a paper presented at the November 18 meeting of the Car Department Association of St. Louis.

and when they do, they arrange to have the men who carded such cars to the repair tracks see the defects and at the same time, in a nice way, explain why they should not have been shopped. If all foremen would so handle, preferably by encouragement from their superior officers, I am sure that the beneficial results would, by far, surpass anything else the mechanical men can do toward bringing about quick improvements.

Nearly one-half of all the loaded cars shopped in Chicago are taken out of service due to defective wheels which, of course, is due to the fact that wheels are subjected to far greater punishment than any other part of the car. Chill-worn wheels are by far in the majority, and our exacting checks have revealed that over 50 per cent, condemned by judgment, are not worn to a depth of $\frac{1}{16}$ in. out of round in 12 in. Many wheels are, however, being received under loaded cars after having traveled hundreds of miles with chilled worn spots much deeper than $\frac{1}{16}$ in., and during the nine years bureau representatives have been inspecting all defective wheels removed from loaded cars at Chicago, not a single one was found with cracks adjacent to the flattened spots, nor any other evidence of failing at that point. In addition, we seldom hear of a wheel having been broken apart, through the tread and flange, at the point where the chill-worn spot is located. In each of the very few cases where it was claimed that wheel was so broken on account of chill penetration, subsequent investigations revealed that it was due to other causes.

This, we believe, should be proof enough to indicate that the worn-through-chill spots are not nearly as dangerous as many people think they are, that it would be entirely safe to revise the A. A. R. rules to provide that wheels with worn chill shall not be removed from loaded cars unless condemnable by a gage adopted for that purpose, and that you would be justified in joining Chicago in so recommending to the Association of American Railroads. The mechanical officers of Chicago, at a recent meeting, unanimously recommended to the A. A. R. that action be taken to provide a gage for condemning worn-through-chill defects, with the view of eliminating entirely the judgment feature, so far as loaded cars are concerned. Our people are not unmindful of the fact that deep spots will cause hot boxes and that they are otherwise detrimental to truck parts, and most of them, therefore, believe that it might be desirable to reduce the condemning limit to a depth of $\frac{3}{64}$ in. [The A. A. R. has since taken official action as recommended.—Editor.]

Improved Loading of Open-Top Cars Essential

Another serious, and I would say inexcusable, deficiency is the improper loading of open-top cars, because, while this affects car mileage, it also involves potential loss of life, destruction of property and large monetary losses. Large numbers of such loads are being accepted from shippers, irrespective of the fact that they are not loaded in accordance with the A. A. R. rules, which is caused primarily by far too many employees not fully understanding details of the rules and what should be done in case they are violated.

The first and, to my way of thinking, the worst thing about this particular problem is the competitive feature, with which I am sure you are fully familiar. This, I would say, is about the most lamentable method of "beating the other fellow to it" that I know of. In fact, it is, in my judgment, vicious enough to be deemed equivalent to a criminal offense. The horrible and dangerous loads of scrap metal being accepted from shippers alone verifies these statements, and many other similar cases of deliberate violations can be proven. It should be promptly

exposed upon discovery, and drastic action should be continued until it has been completely eradicated. I should like to tell you how I think it can be done, but this is not the proper place to do it.

The next detrimental feature is lack of familiarity with the loading rules on the part of many employees upon whom we rely to see that they are complied with. I contend that every person who is entrusted with the great responsibility of seeing to it that the loads are properly and safely secured must know the full meaning of the 21 general rules, except the tables, by heart in order to fulfill his obligation adequately, because some of the most important details covered by these rules are not repeated under the figures. It is surprising, but nevertheless a fact, that a large percentage of the men assigned to this exceptionally important work do not thoroughly understand these rules, and the further unvarnished fact is that the supervisors under whom they are employed are well aware of it. I stand ready to prove this to any one who may doubt the correctness of this statement. I do not at all intend to cast reflections on our workmen, because from my experience with them I know that, with the right kind of help and encouragement from "the boss," they will soon become experts. There are, of course, some who will not make the effort, and others who have not been blessed with sufficient mentality to absorb them, and I would say that any supervisor who fails to assign such men to other duties could hardly be classed as a true supporter of "Safety First" or an asset to his employer.

A. A. R. Loading Rules Now

Being Revised and Improved

The enormous numbers of such loads becoming disarranged in transit, even though originally secured as provided for in the loading rules, is creating much concern, and the General committee of the A. A. R. Mechanical division, recently instructed the Committee on Loading Rules to review all of the rules, with the view of having them improved, if necessary. You men who are at all familiar with these rules must know that many of them are far from being what they should be to meet modern operating requirements. The Committee on Loading Rules well knows what is needed to build better loads, but it is at its wits end in knowing how to convince the shipper that increased loading expense is justified, which more than anything else is due to the fact that the railroads do not make the efforts they should to support this committee. In fact, some do not cooperate at all, despite repeated appeals from the Association of American Railroads, and most of them only partially so. I am basing these statements on the unsatisfactory reaction to A. A. R. Circular 620-D, issued by the General committee on March 30, 1939. The fact that most of the reports received are too incomplete to be of any help to the Committee on Loading Rules is additional proof that employees executing them have much to learn about the loading rules, and that they have not been properly trained.

The Committee on Loading Rules is also being continually handicapped and embarrassed in dealing with some shippers for better loading, because they know so well that the railroads are repeatedly accepting loads from other shippers regardless of the fact that they have not at all been secured in accordance with the loading rules. This applies outstandingly to the steel shippers, who are continually receiving extremely dangerous car loads of scrap iron without any of the securements provided for in the loading rules, and they can hardly be blamed for asking the Committee on Loading Rules why

the railroads are so exacting with them and so lenient with others.

Briefly summarizing, I suggest (1) That greater efforts be made to keep empty cars in suitable repair for carrying loads to destination without being shopped en-route; (2) that you refrain from shopping loaded cars unless absolutely necessary for safety or compliance with the law; (3) that chief mechanical officers keep records of all loaded cars shopped on their respective systems, with the view of keeping constant checks for improved performance; (4) that you ascertain, beyond doubt, that all employees having to do with the loading of freight cars are fully familiar with the A. A. R. loading rules; and (5) that agreements be made to the effect that at points where two or more railroads serve one and the same shipper, cars or loads rejected by one railroad will not be accepted by another.

Private Cars Also Should Be Kept "On the Move"

Privately-owned cars are becoming more and more important to the railroads, and, while some of them are unsuited for present-day operating conditions, enough cannot be said about the splendid manner in which the great majority have been improved, with profit to the railroads, particularly so, since the high-class freight they carry is far better protected from loss or damage. It is, however, to be regretted that too many railroad employees do not seem to realize fully that this expensive equipment is deserving of at least the same consideration as railroad-owned cars.

The major revenues from these cars is basically derived from the mileage they make. They earn nothing while standing still, and too frequently we hear the remark "no hurry about that private car, because it draws no per diem, etc." Private cars will undoubtedly be in great demand during these critical times, and I firmly believe that we will benefit the railroads equally as much, if not more, than the car owner, by giving them preferred attention so far as repairing them promptly and keeping them on the move is concerned.

From the rather pointed comments I have made, you might gain the impression that the carmen are degenerating, but that would be wrong and a serious injustice, because they are doing a splendid job in spite of reduced forces, which is proven by the comparatively few accidents occurring on the railroads, even at modern high-operating speeds, on account of mechanical failures. In other words, I deem carmen second to none, so far as efficiency and loyalty are concerned, and I know that they will be out in front, so to speak, in assisting their employers to cope successfully with the tremendous problems confronting them.

In conclusion, I want to pay my respects to the officers guiding the destiny of the St. Louis Car Interchange Bureau, particularly so, on account of the earnest efforts being made in your terminal to respect fully the A. A. R. rules of interchange, an objective which is also emphasized at the Chicago terminal. We know that this practice, as well as the fine cooperation and friendship built up between St. Louis and Chicago, will prove profitable to our employers, and highly pleasing to all who have worked so hard to bring it about.

"SNOWVILLE, N. H." IS THE POSTMARK which will appear on some 10,000 directories of northern New England winter sports published by the Boston & Maine. On December 26 the entire lot of booklets were mailed from Snowville and their stamps cancelled with the postmark of that tiny hamlet. True to form, the village streets were covered with eight inches of snow that day.

What the Public Thinks About the Railroads

THE Opinion Research Corporation was retained by the Association of American Railroads last summer to make a survey of public opinion—by its scientific sampling process—on various aspects of railroad transportation. This survey, compilation of which was but recently completed, revealed that on many questions the public held views distinctly favorable to the railroads; and, where its opinions would not be to railroad liking, such views were found to be based largely on misinformation and misconception.

For example, 56 per cent of persons interviewed believed that the carriers have done a good job in preparing to handle emergency traffic, and an even larger proportion (61 per cent) believed that the roads would continue to handle satisfactorily all the traffic the defense program would produce. But, quite contradictory to these preponderant views, half of the persons questioned believed it would be necessary for the government to take over the railroads in event of war. The principal reason assigned by these people for this belief—seemingly contrary to their opinion that the railroads were going to handle defense traffic efficiently—was the peculiar notion that government control would, somehow, permit quicker movement of men and supplies. Some of them foresaw government operation as necessary in war-time to prevent strikes. Friends of private operation were predominant among men, upper and middle income recipients, rural residents and those living in cities of under 100,000, Easterners and Middle Westerners. Government operation as a wartime expedient was favored by a majority of the women questioned, by recipients of lower incomes, by persons under 44 years of age, by dwellers in the larger cities, and by Southerners and Far Westerners.

A large majority (68 per cent) of those queried expressed the belief that railroads were more important to the defense program than either trucks or barges, but 46 per cent, when asked which part of the transportation industry had done its defense job the best, answered, "Airplanes." Twenty per cent chose the railroads, 19 per cent shipbuilding, 12 per cent automobiles and the trucks came last with 6 per cent.

Indicating the lack of information on the part of a public which, nevertheless, has pronounced opinions, was the fact that 42 per cent of the interviewees either didn't know that the railroads were operated by the government during the last war, or believed that they were privately operated. On the other hand, almost half of those who *did* know that the carriers were operated by the government during the last war, expressed the opinion that the government did not do as good a managing job as their private owners had done. Such of the friends of government operation in war-time who knew that the railroads were government-operated in the last war, revealed a belief that government operation was a success—that it speeded up performance and moved troops and materials without delay.

None of the persons who had the impression that railroad service during the last war was unsatisfactory knew such real reasons therefor as the use of freight cars for storage, chaotic issuance of priorities, etc. Instead, they blamed the trouble on inadequate railroad equipment—and more of them held railroad managements at fault than blamed the government. Of the 54 per cent who were of opinion that the railroads were not able to handle all traffic without delay in the last war (and most of whom thought it may happen again), fewer than one in

five had heard of any steps being taken to prevent a recurrence of such difficulties.

Further evidence of the quality of transportation information possessed by the American people is the revelation that, last summer anyhow, 37 per cent of them believed that trucks handled more traffic than railroads. Thirty per cent of the persons questioned were unable to think of any particular advantage in shipping by rail, whereas only 10 per cent were unable to name some advantage in shipping by truck. Nearly four out of five persons believed that the railroads were now able to handle more traffic than before the depression, but 40 per cent of that number erroneously attributed the greater capacity to a larger car supply.

Three people out of five chose the airlines when asked to name the nation's most progressive agency of transportation. Less than one out of five persons picked the railroads, and the trucks were the favorites of an equally small proportion.

Asked to name specific examples of recent railroad progress, 17 per cent of those questioned were unable to reply. Thirty per cent mentioned more modern locomotives and 29 per cent cited streamlined trains. The proportion who cited improved freight service or reduced rates and fares was negligible. Half of those questioned could think of no service improvements the railroads ought to make—while better schedules, more through trains, faster service and more modern equipment were the principal suggestions offered by those who had them to offer.

Almost three out of five people (58 per cent) believed that railroad managements have done a good job. Another 36 per cent thought they had done a fair job and 6 per cent a poor job. Strangely enough, the women, large-city-dwellers and the lower income groups, which showed majorities for government operation in war-time, were also the groups which had the highest opinion of the performance of railroad managements.

Asked which transportation agency has the best chance to operate profitably under present conditions, 48 per cent picked the trucks, 33 chose the railroads and 19 per cent the barge lines. Relatively few of the persons who picked trucks and barge lines as having the best chance to make a dollar gave special governmental favors as a reason for this advantage. Conversely, of those who chose the railroads as the least likely to make a profit, few ascribed this handicap to special favors granted their rivals. The Opinion Research Institute concludes that "the public is not conscious of government aid as a primary factor in the competitive position of any carrier." Furthermore, there is a substantially larger number of people who believe that the railroads have received special governmental aid than who hold that view with respect to trucks or barge lines. A predominant majority of those who believe that one or another carrier has been aided more than others by the government, favors such special treatment. When it comes to naming specific aids by government to transportation, however, many more persons were able to specify such assistance received by trucks than by railroads.

Four out of five persons were of the opinion that railroads maintain their own roadway while their rivals use facilities maintained at public expense, but only a little more than half of all persons interviewed both took this view and agreed that the situation was unfair to the railroads.

On the question of whether trucks pay their fair share of highway costs, half believed that they did not; a third believed they were paying just enough; and the balance believed they were overcharged in this respect. More than half of those interviewed favored greater regulation

of trucks, especially by state governments. The particular forms of more intensive regulation advocated were: Observance of traffic rules; reduced permissible sizes and weights; requiring trucks to build and operate their own highways; restricting trucks to use of highways at certain hours. A majority of persons interviewed did not agree with the trucking industry in its campaign against alleged "interstate barriers."

Three out of five people were found to have no opinion as to whether inland waterway carriers are paying adequately for the facilities placed at their disposal, and only one person in seven was disclosed as having any understanding of the real reason why barges can provide transportation at low expense to shippers.

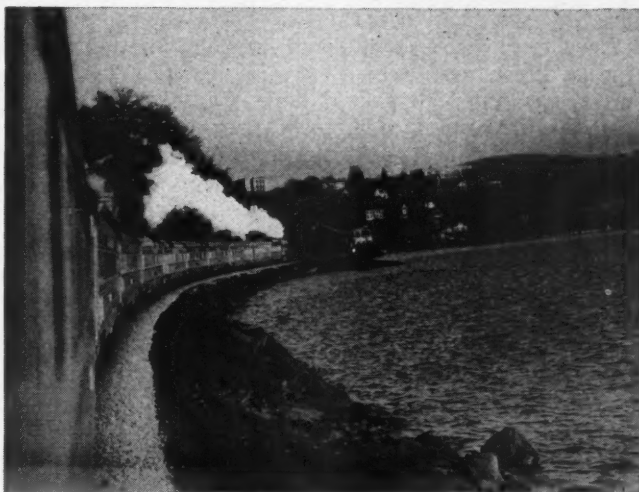
Two out of three people were not in favor of government ownership of any of our larger industries, and of those who did pick industries for government ownership, more chose electric utilities, banks and insurance companies than railroads. As a matter of fact, almost 2 people chose the electric utilities and 1½ chose banks, to one who picked on the railroads for socialization.

Three out of five people had the impression that the railroads had made a profit or broken even in the past decade, while seven out of eight expected that they would again become prosperous. Almost half believed that the railroads are overcapitalized. One person in three thought the railroads were owned principally by insurance companies and about the same ratio thought ownership was in "Wall Street." Only one in eight believed that small investors had any considerable stake in the railroads.

Only two people out of five were aware that the railroads did any buying in their communities, but there was a much larger awareness of the local existence of railroad payrolls.

One of the most significant of all the discoveries of this investigation was the lack of accurate public information as to the price of railroad passenger service. Asked to name a town they would like to visit, 7 out of 10 were willing to guess what the railroad coach fare would be—and, of those who were willing to make such estimates, 70 per cent guessed too high. On the other hand, 57 per cent of those estimating the first class fare (plus Pullman) guessed too low. Four out of five persons said that bus fares were lower than railroad coach fares, and most of these had the notion that the difference was substantial.

* * *



The New "Empire State Express" of the New York Central Shown Southbound Rounding the Bend at Peekskill, N. Y. The View Was Taken From the Platform of One of the Rear Cars

Annual Report of the I. C. C.

Says that delays in the construction of new equipment and depletion of materials for repairs comprise the worst threat to adequate and efficient service

WASHINGTON, D. C.

DELAYS in the construction of new equipment and the rapid depletion of materials necessary for repairs to existing rolling stock and other facilities comprise "the greatest and most imminent danger which threatens the provision of adequate and efficient railroad service during the remainder of the present emergency," said the Interstate Commerce Commission in its fifty-fifth annual report which went to Congress on January 7. "It is essential to the national welfare that this danger be removed," the commission added.

Recommends Some Relief from Land-Grant Rates

The report in the usual form is a document of 142 pages plus appendices; generally, it reviews the period from November 1, 1940, to October 31, 1941. Among the legislative recommendations is one calling for enactment of H. R. 5598, which was introduced by Chairman Lea of the House committee on interstate and foreign commerce to define specifically the government freight which remains eligible for land-grant rates under the provisions of the Transportation Act of 1940. That act repealed land-grant rates except insofar as they apply to military or naval supplies moving for military or naval use, and to military or naval personnel while traveling on official business. H. R. 5598 would provide that military or naval supplies shall embrace only munitions of war and property necessary for the maintenance and subsistence of the armed forces of the United States; also, that land-grant deductions shall not be applied to reduced rates published at the request of a government agency for purposes connected with the national defense program. This would give the railroads some relief from difficulties which have arisen with respect to the application of land-grant rates to the great volume of traffic moving in connection with the defense program; but the carriers, of course, prefer to see the enactment of the complete repealer, also introduced by Mr. Lea but not mentioned by the commission.

Another legislative recommendation in the report repeats the suggestion of its two immediate predecessors that the commission should have the same emergency powers with respect to motor carriers that it has with respect to railroads. Also, the commission calls for amendments to the act which would give it additional power to delegate its work to individual commissioners or boards of employees; and recommends the enactment of legislation giving it authority on complaint to set aside state regulations governing sizes and weights of motor vehicles. The latter was previously recommended last August when the commission sent to Congress the report on that matter which had been called for in the Motor Carrier Act and the Transportation Act of 1940.

Materials for Equipment

The aforementioned warning with respect to the railroad equipment situation came after the commission had noted how the railroads "have been conservative in their

plans, not only because of their own financial situations, present and prospective, but also in the interest of conservation of materials which are needed for national defense." Thus, as the report put it: "There is all the more reason for the avoidance of anything which would cause delay in the construction of this new equipment. It is vitally necessary if the orderly and expeditious progress of the national defense program is to be protected, in view of the indispensable relation of transportation to that program. As this is being written, there is cause for apprehension that, in the allocation of the metals of which there is a shortage, the railroads may be deprived of the materials necessary for the prompt construction of this new equipment, or even be unable to obtain an adequate supply of materials for the repair of the motive power and cars which are now in service and of the way and structures over which they operate." Meanwhile, the situation of the motor carrier industry "is much the same"; while the need of barge lines for materials "is like that of the railroads and the motor carriers."

The report opens with its discussion of "Transportation and National Defense," pointing out how with defense traffic "the business and the revenues of the carriers have mounted almost as a river rises to a spring freshet." This is called "a happy change from what had gone before," but one which has brought "new questions." In other words, as the commission sees it, an indefinite continuance of present traffic would not necessarily solve railroad financial problems—"for traffic and revenues do not always run in parallel lines, and net income may be a widely divergent figure." Following through on that idea, the report has this to say: "If we are caught in a vortex of rising wages and prices, to say nothing of taxes, railroad expenses and charges may outstrip revenues, unless they are augmented by corresponding rate increases; and the effect of the latter, in view of the wide prevalence of transportation competition, is never certain. Nevertheless, it is probable that if traffic could be maintained, the railroads would enjoy a considerable measure of financial relief."

Present Traffic "No Normal Growth"

At the same time the commission thinks it is only wise to keep in mind "that present traffic is no normal growth"; it "is not the creation of private business enterprise but the result of an enormous expenditure of borrowed government funds in a supreme effort deemed necessary for national defense." And "traffic thus created is not the stuff out of which future railroad prosperity is likely to be built." While the commission hopes that the country will avoid a "disastrous aftermath," it nevertheless warns that "it certainly is not safe to assume that this will prove possible, or that the railroads quite apart from any decline in general traffic, will not be faced with a competition from other forms of transportation more formidable than any they yet have encountered."

In view of these circumstances, "and with the future so difficult to forecast," the commission has been unable to arrive at the conclusion, "which so many have urged upon us, that present or immediately prospective earnings evidence values of the properties of the railroads which are in bankruptcy materially in excess of the estimated values upon which we have based our plans of reorganization." Moreover, it is also suggested that it would be a mistake for railroads not in bankruptcy "to ignore the fact that they have a very heavy burden of debt and that it may be a crippling burden in the future, if earnings should radically decline." Thus the commission has noted "with approval" that many managements "are avoiding this mistake and are using the favorable earnings of the present, in one way or another, to reduce fixed charges as rapidly as practicable." It consoles stockholders, who "may on first thought be disposed to object to such a policy," by pointing out that stockholders "will suffer most in the event of future insolvency."

No Breakdown of Service

Commenting on the service of transportation agencies, the commission recalled how the reduced car supply of the railroads gave rise to fears that congestion would attend the handling of defense traffic. But such apprehensions "have thus far proved unfounded." As the commission sees it, there were two principal reasons for this—first, improvements in operating efficiency, and second, the fact that the lessons from experiences in the first World War had been learned. Also cited are the activities of the Car Service Division, the Shippers' Advisory Boards, Ralph Budd, former defense transportation commissioner, and the commission's emergency powers. As the commission notes, there has been no occasion to use such powers; but "we have endeavored to be in a position to use them promptly and effectively if need should develop and to join in the efforts to avoid such need." The Bureau of Service now has 40 agents in the field as compared with 16 at the beginning of the emergency.

The remainder of the commission's discussion of the service situation embodies its aforementioned comment on the need for adequate supplies of materials for equipment; and the report then proceeds to speak of "indications that some of those in authority may entertain the thought that because the supply of metals is not sufficient to meet all needs which could be regarded as essential, the transportation quota may be restricted to the service needs which are predominant in the emergency." If that is to be the development, and the railroads are not to be allocated materials necessary to maintain a service which would meet all demands, the commission would prefer to have any necessary restrictions imposed upon the production of commodities rather than upon their movement after they are produced. "Restrictions of the latter character," the commission says, "will be most difficult to plan and administer, and inevitably will have indirect results which will seriously impair the movement of all traffic, including the movement of essential war materials."

All Carriers Have Important Wartime Roles

As to the emergency roles of carriers other than the railroads, the commission said that they, too, have essential parts to play. For example, the cargo carriers on the Great Lakes "are performing with much efficiency a service of enormous importance." The business and revenues of the truckers have increased "at an even

faster rate than the business and revenues of the railroads"; while motor carriers of passengers "are playing a very important part in the movement of troops and of the civilian population employed in the defense industries." Here reference is also made to Commissioner John L. Rogers' service as chairman of the Central and Regional Motor Transportation Committees which were set up by former Defense Transportation Commissioner Budd.

The report's section covering traffic and earnings of transportation agencies shows that aggregate revenues of all carriers reporting to the commission for the 12 months ended June 30, 1941, amounted to \$6,669,716,000, an increase of 9.7 per cent over the calendar year 1940, and 18.6 per cent above 1939. Subject to "a margin of error that may be considerable, especially for highway transportation," the report presents data on the distribution of traffic as between types of carriers. The figures show that of the total ton-miles of intercity traffic in 1940 the railroad produced 61.34 per cent; highway carriers, 7.91 per cent; inland waterway carriers, including the Great Lakes, 19.13 per cent; pipe lines, 11.62 per cent; and air carriers, less than one per cent. All types of carriers shared in 1940's 13.5 per cent increase in ton-miles over 1939, the air carriers and carriers on inland waterways, including the Great Lakes, showing the greatest percentage gains.

A similar breakdown of 1940's intercity passenger-miles shows that the railroads produced 8.71 per cent of the total; highway vehicles (including private automobiles), 90.46 per cent; water carriers, 0.46 per cent; and air lines, 0.37 per cent. Excluding travel in private automobiles, which accounted for 86.43 per cent of the estimated total, the 1940 intercity passenger-miles were divided as follows: Railways, 64.16 per cent; buses, 29.73 per cent; inland waterways, 3.41 per cent; air lines, 2.7 per cent. The revenue passenger-miles performed in scheduled domestic air services were equal to 14.28 per cent of railway passenger-miles in parlor and sleeping cars for the year 1940. With respect to railroad fares, the commission says that the effects of reductions in stimulating the volume of travel "are clouded by sharp changes in business conditions and the national income and, recently, by the large and increasing movements of the armed forces and civilians incident to defense activities."

Operating Ratios and Employment Trends

For the 12 months ended August 31, 1941, the operating ratio of the Class I roads was 67.9 per cent—"lower than that for any calendar year since 1916, when it was 65.5 per cent." Data on railway employment show that this has not recovered to the same extent as revenues and traffic. The September, 1941, index of employment was 116.4, as compared with indices of 146.7 for freight revenue, 122.8 for passenger revenue, and 121.6 for carloadings. Comparing the first eight months of 1941 with the corresponding period of 1930, operating revenues amounted to 95.3 per cent of the 1930 level, but employment was only 72.3 per cent of the average for the 1930 period. However, total compensation for the eight months of 1941 was 82.7 per cent of the total for the same period of 1930.

Devoting a paragraph to the Board of Investigation and Research created by the Transportation Act of 1940, the commission says that the specific studies assigned to that agency embody matters "of large public importance." And the commission "shall co-operate and collaborate with it to the extent that our duties permit, as indeed we have done since its members took office." Next comes

a reference to the recommendations with respect to commission procedure which were made early in January, 1941, by the Attorney General's Committee on Administrative Procedure. Those recommendations "will receive the careful consideration which they merit" in connection with pending studies looking to a revision of the rules of practice. The latter are being made by committees of the commission and of the Association of Interstate Commerce Commission Practitioners.

In a 3½-page discussion of "Delegation of Authority," the commission makes its plea in support of the aforementioned legislative recommendation in that connection. Extensive delegation of authority, it is asserted, "is an obvious necessity;" for "more and more it is becoming difficult for the members of the commission to avoid becoming buried in an avalanche of detail and to find time for the thorough study and constructive thought which ought to be given to the major issues which come before it." Transportation Act of 1940 provisions which ran to the delegation-of-authority matter, the commission complains, did it "a disservice rather than a service;" they produced a net result which was "adverse rather than beneficial." It now seeks to correct the situation, and it spells out specifically what it wants the recommended legislation to accomplish.

More than the usual amount of space is given to pipe lines; and there it is pointed out that "competition between the different types of carriers within our jurisdiction has become more acute in the struggle for traffic in petroleum and its products." Also mentioned is the competition which carriers of all types encounter from the producer-owned tank truck. If present trends are not changed, the commission foresees difficulties in the way of any attempt "to maintain a fair and relatively equal rate structure" for any of the competing carriers involved.

The beginning of water carrier regulation under Part III of the Act is covered briefly as also is the legislation pending in Congress for the regulation of freight forwarders. If the latter is enacted, "our duties will again be substantially enlarged." Actions which the commission has taken under powers it got in the 1940 act to regulate contracts for the protection of perishable freight against heat or cold are explained, and the report then proceeds to its mention of the pending general investi-

gations of the class rate structure and consolidated freight classification—Nos. 28300 and 28310. Additional hearings in those proceedings "are to be held in the coming months." Considerable space is devoted to a recitation of difficulties which have arisen because of the overlapping federal and state authority on the matter of standard time. In previous reports the commission has recommended that Congress legislate for complete federal-government occupancy of the standard-time field; it renews that recommendation.

The remainder of the report embodies the usual highlight review of important cases disposed of and pending; and the usual separate accounts of the work of the commission's various bureaus.

The Polariscope—A New Aid in Rail-Joint Design

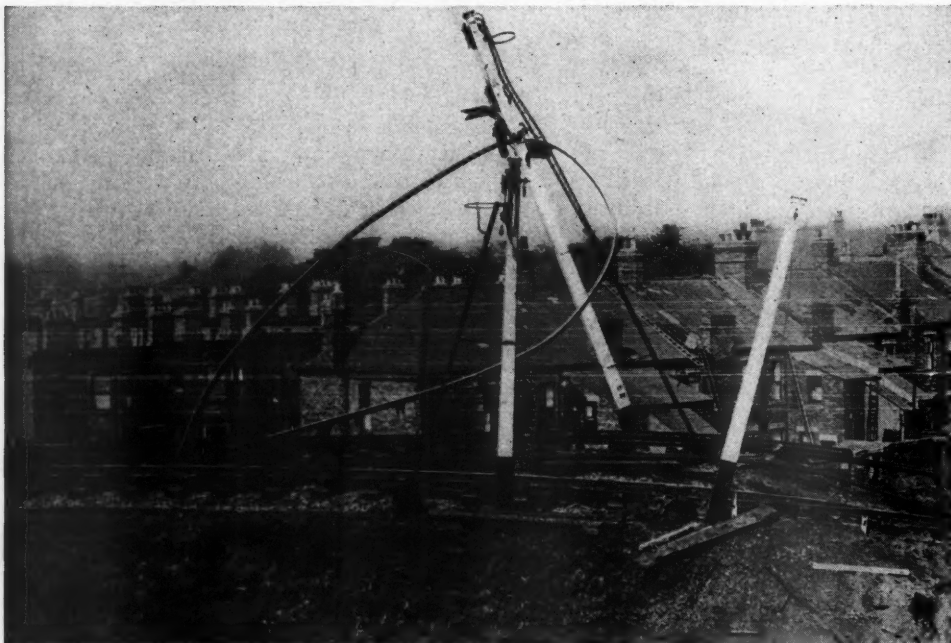
(Continued from page 159)

The mechanical test then sustains the results of the photo-elastic analysis.

Both the time and the cost of making the mechanical test were materially greater than for the photo-elastic study, and the results obtained showed deformations in only a few places on the surface of the rail end. A comparison of these results with the detailed stress distribution shown in the photo-elastic studies emphasizes the utility of photo-elasticity. It has been our experience, as we have endeavored to point out, that the results obtained by these photo-elastic comparisons in checking design modifications can be relied upon, providing the limitations imposed by a two-dimensional investigation are observed.

Our experience with photo-elasticity as an aid in rail-joint design illustrates only one application of this method of stress analysis; therefore, we wish to leave no misconceptions regarding its scope. In applying it to other engineering design problems it must be remembered that a knowledge of its limitations is also of great importance. However, we feel that it will be utilized more and more extensively as engineers become acquainted with its simplicity and adaptability.

* * * *



Bomb Damage Some Time Ago to L. N. E. R. Lines on the Northeast British Coast Produced This Curious Effect. A Single Rail Was Completely Uprooted and Looped Itself Around a Signal Post. Engineers Had the Damage Repaired in a Few Hours

Conclude Hearings on Petition for Rate Increase

Oral arguments to start on January 12. Shippers and other users of railroads support application to increase freight and passenger rates

ORAL hearings before Division Two of the Interstate Commerce Commission, consisting of Acting Chairman Clyde B. Aitchison and Commissioners Charles D. Mahaffie and Walter M. W. Splawn, on the petition of the railroads for an increase in freight and passenger rates (Ex Parte 148), were completed on January 8 after three days of testimony. Hearings on the application of the Railway Express Agency were held on January 9 and oral arguments were scheduled to begin on January 12. All hearings were held in St. Louis, Mo., after being called for Chicago and being transferred to St. Louis because of congestion in hotel facilities at Chicago.

As the hearings opened, the names of 181 witnesses who would require about 67 hours for their testimony had been filed with the commission by interveners but upon the request of Mr. Aitchison the number was reduced by grouping shippers and selecting one or more witnesses to represent each group. To further speed up the hearings, applicants were heard by all three commissioners on the first two days while on the third and fourth days, three hearings were held simultaneously. Mr. Aitchison heard the testimony pertaining to products of mines and forests, Mr. Mahaffie, that relating to animal and agricultural products and Mr. Splawn, that regarding miscellaneous and l.c.l. products.

Shippers Favor Increase

The most outstanding phase of the hearings at St. Louis was the willingness of shippers to accept the rate increases proposed by the railroads. This is probably the first time in history that so large a number of shippers went on record in support of an application to increase rates.

Foremost among those approving rate increases was the National Industrial Traffic League which, at a special meeting at St. Louis on January 4, passed a resolution endorsing the increases sought "in principle as a temporary measure of relief." The resolution was without expression as to the amount, method and form the increases should take and left these matters with the Interstate Commerce Commission for determination, with the provision that the railroads set up machinery and procedure to insure speedy action on any complaints of hardship, injustice or maladjustments which may result from such advances as the Commission may authorize.

Another favorable expression was that made by the Office of Price Administration through J. H. Eisenhart, Jr., who testified that the O. P. A. had no opinion as to the merits of the application and was only concerned with the establishment of adequate machinery for making rate adjustments.

Twenty-one state commissions recognized the railroads' need for more revenue but were opposed to in-

creases in rates on live stock and agricultural products. Some of these commissions also objected to increasing rates on certain commodities.

Others testifying in favor of the railroads' application included E. D. Scruggs, railroad analyst of the Metropolitan Life Insurance Company, the South East-South West Shippers Conference, which favored a temporary increase on a percentage basis that would be just enough to meet the increased costs of operation, and W. H. A. Bailey, chairman of the traffic committee of the American Paper and Pulp Association. A resolution passed by this association took the position that the railroads should be permitted to make up the amount of revenues lost as a result of increased expenses but contended that the burden should be distributed equally among all users. This association did not look with favor upon a preferential treatment of ore as proposed by the railroads and felt that if special treatment is also to be given coal as the carriers indicated, the burden should be borne equally by all users. It also took the position that if any raw materials are to be exempted, those used in the manufacture of paper should be given special treatment.

Certain coastwise water carriers intervened to ask the commission to act favorably upon the petition of the rail lines in connection with the all-rail and rail-and-water rates, and upon the petition of the coastwise water lines for similar increases in the all-water and water-truck rates.

Railroads Complete Their Testimony In Two Hours

The railroads' case was presented by R. V. Fletcher, vice-president, Dr. Julius H. Parmelee, director of the Bureau of Railway Economics, and A. F. Cleveland, vice-president of the Traffic Department of the Association of American Railroads and H. W. Siddall, chairman of the Transcontinental and Western Passenger Association. Their direct testimony was completed within two hours on the first day. Cross-examination took another three hours.

In his opening statement Mr. Fletcher pointed out that the railways departed somewhat from precedent and set out in detail the proposals for increasing rates in order to compensate for increases in expenses over which the railroads have no control. In an effort to expedite the disposition of the case, all testimony except that which is clearly essential to establish the need of revenue would be eliminated, he said.

He also stated that if the increases asked for are permitted to go into effect with a minimum of delays, the carriers will set up a committee which will quickly pass upon questions raised by shippers and others. In conclusion, he said, "we must not overlook the fact that the problems confronting us are national problems, into the solution of which parochial considerations count for

little. The railroads are essential agencies of national defense and the war effort of the nation must function nationally, with the railroads performing as if they were a single system. In a revenue case of this character, the need for expedition, coupled with the demand for utmost efficiency in handling war traffic, argue for a percentage increase as the only practicable method of procedure."

Expenses Will Be Higher In 1942

Dr. Parmelee declared that since September, 1941, the operating expenses of the railroads have gone up more than one million dollars a day, and will be even greater in 1942. The largest part of this tremendous rise in the cost of running the railroads, he continued, is due to the recent wage increases, which were made to avert a threatened nation-wide strike. Dr. Parmelee stated that railroad expenses would thus be boosted \$331,771,000 a year. This, he pointed out, is equivalent to about one-third of the net railway operating income during the 12 months ending October 31, 1941, and is equal to more than two-thirds of the net income after charges in that same period.

"During the six months from December 1, 1940, to June 1, 1941, the average weighted price of railroad materials (including fuel) increased 4.1 per cent," he continued, "during the next succeeding six months, from June 1, 1941, to December 1, 1941, another increase of 5.4 per cent occurred. The cumulative effect of these two increases was an increase of 9.8 per cent during the period of twelve months from December 1, 1940, to December 1, 1941.

"Fuel alone (including coal and oil) showed an increase of 6.3 per cent from December 1, 1940, to June 1, 1941; a further increase of 3.8 per cent from June 1, 1941, to December 1, 1941; and an overall increase during the twelve months ended December 1, 1941, of 10.3 per cent.

"If a construction program of 36,000 freight cars and approximately 200 locomotives per quarter be continued throughout 1942, the total construction that will necessarily be financed by the carriers during the year will amount to 144,000 freight cars, 800 locomotives, and an unspecified but substantial number of units of passenger, work, and miscellaneous equipment. It seems reasonable to assume that a program of this magnitude would involve a total capital expenditure for equipment in 1942 of not less than \$600,000,000, of which some 20 per cent, or \$120,000,000, would be financed as down payments, while the balance would be spread over periods of ten years or more. On the basis of an average period of ten years, the carriers would make an average installment payment of \$4,000,000 per month. Interest payments would start at approximately \$800,000 per month, and would be gradually reduced as the installments were amortized. These payments, including the down payment, the installment payments, and the interest payments, would aggregate no less than \$150,000,000 in the year 1942, and would have to be met out of the railroad treasuries, for the most part out of the net earnings or other cash reserves of the carriers.

"Maintenance expenditures seem likely to be needed at a reasonably high level in 1942. The maintenance ratio was 30.9 per cent in 1939, 30.6 per cent in 1940, and is estimated at approximately 29.9 per cent in 1941. This ratio has showed only a slight decline, in spite of an increase of 1½ billions in annual revenue between 1939 and 1941. With the heavy and unusual traffic demands on the carriers in 1942, and with the increases wage and material costs to be met, the maintenance ratio

seems likely to remain at 30 per cent or more during the coming year."

In order to keep abreast of demands, Dr. Parmelee said, the railroads must buy millions of dollars' worth of new equipment and properly maintain their track and structures and repair their cars and locomotives. All of this, he stated, will result in added expense.

The railroads, which are now operating at a peak of efficiency and economy, will find it very difficult to meet the increase in expenses out of present rates, even though they handle as much or more business than they did in 1941, Dr. Parmelee contended. He showed that while freight traffic moved by rail last year was 11.3 per cent greater than the average of the 1921-30 period, freight revenue was 5.4 per cent less.

Similarly, he said, although passenger business last year was below that of the 1921-1930 period by 19.2 per cent, revenue derived from this traffic was down 51.7 per cent.

The reason for this, he said, is that the average revenue for hauling a ton of freight one mile has steadily declined until now it is only slightly above nine-tenths of a cent, or 26 per cent less than it was 20 years ago, and the average revenue for carrying a passenger one mile is but 1.754 cents—the lowest on record.

If the commission acts favorably on the railroads' petition, railroad revenues, based upon the estimated freight and passenger traffic in 1941, would be increased by \$358,811,000 a year, according to Dr. Parmelee. Of this amount, he stated, freight would yield \$312,102,000; passenger traffic \$45,741,000, and milk revenues, \$968,000.

Prompt Application Can Be Made Only On a Percentage Basis

The only way by which a prompt application can be made is on a percentage basis, according to Mr. Cleveland. "To work out a proposal such as was presented in Ex Parte 115," he continued, "would have required from six to eight weeks and during this time the loss in revenues would have amounted to from \$42,000,000 to \$60,000,000. A further loss would have occurred in the hearings of the case, which could not have been presented as promptly as they can when a percentage basis is used. In addition, the issuance of the tariffs to make the commission's order effective would have brought about much more serious problems than would be involved under a general percentage increase, and the tariffs could not possibly have been made effective as quickly as under the plan selected. The question of a double advance where rates are made on combination would have arisen immediately and all of the difficulties involving litigation and dissatisfaction would have resulted. We do not believe that the commission, the shipping public, or the railroads want to be confronted again with the problems and the difficulties and the unsatisfactory situation that occurred following General Order No. 28 where, in order to prevent a double advance, the so-called 'Kelly Combination Tariff' was provided. I feel sure all will agree that this was the most unsatisfactory tariff situation with which the interested parties have ever been confronted. Had the method of applying specific increases been followed in lieu of a percentage increase, we believe that the railroads would be fortunate if the rates were in effect before July 1, 1942.

"There is another reason why, under a situation of this kind, a general percentage basis with necessary readjustments made thereafter is much fairer. The in-

creased costs, which are the cause of the application for the increases, pertain to every part of every service and the greater the service the greater the added cost. Under those circumstances it is more equitable that the increase should be spread so that the greater the service the larger the increase.

"The general basis adopted was that all freight rates should be increased ten per cent, excepting only from this general basis, coal (both anthracite and bituminous) and articles classed therewith, coke (the direct product of coal), and iron ore. It is also proposed to make the same 10 per cent increase in all charges for accessorial services, except that it is not proposed to increase the charges for demurrage, dockage, tipping, or tollage, for loading or unloading live stock or for protective service against heat or cold. There is no proposal in this proceeding to make increases in the excepted charges and it was not intended to commit the railroads against hereafter making or undertaking to obtain increases in any of those charges. So far as concerns increases in the charges for protective service against heat or cold, it was the intention to leave the decision in the matter to the National Perishable Freight Committee to take whatever action it might decide upon.

"In presenting these proposals, the traffic officers of the American railroads are fully aware that a percentage increase in rates results in some disturbance of relationships of long standing, such as port relationships on domestic, coastwise, and foreign traffic; rates via differential routes, such as the rates from New England via certain routes to Chicago, etc.; group adjustments of rates differentially related; gateway and marketing relationships, such as the proportional rates on grain and its products, rail and water rates including joint adjustments involving the Great Lakes, joint rates involving the inland waterways, and joint rates involving ocean carriers. It is the intention of the traffic officers, if the proposed increases are permitted to become effective, to proceed immediately in the manner outlined in Appendix IV of the petition to make readjustments in the resulting rates so as to restore such established relationships and differentials. To expedite the handling of such readjustments, it is suggested that both the commission and the railroads set up special committees with the object in view of taking care of such situations very promptly. This was done in connection with the increases in Ex Parte 123 and we believe that the way it was handled then was mutually satisfactory to the commission, the shippers, and the railroads. With the experience obtained in connection with handling Ex Parte 123, it is our belief that it is possible in connection with the present application even to improve upon that which was accomplished in the earlier proceeding.

"The traffic officers are also aware of the existence of certain competitive and commercial relationships on commodities produced in widely separated territories where necessities may arise for special treatment, such as the sugar adjustment to Chicago and the citrus fruit adjustment to New York, which are mentioned only as illustrative of this class of adjustments. After discussing the situation with the traffic executive committee of the National Industrial Traffic League, it has been recommended to the three district traffic executive committees that on inter-territorial traffic involving these situations a special committee of chief traffic officers should be provided who will receive applications of this nature and who will give those applications very prompt consideration and make readjustments as necessities therefore are shown. This does not mean that all these readjustments will be effected entirely by reductions but that each situation will be dealt with on its merits and that

there may result certain increases, as well as reductions in bringing about the proper basis.

"As regards situations which are entirely intra-territorial in character, it was the belief that such situations as here described can be disposed of quickly and properly through the usual machinery, but in connection therewith I call attention to the statement on page 8 of the petition which is as follows: 'Petitioners state that if they are permitted to make effective the increases in their rates, fares, and charges herein proposed they will proceed with diligence to make such readjustments in the resulting rates as commercial and traffic conditions may require.'

"On behalf of all the carriers parties to this petition, I am in position to state without qualification that the above commitment was made with the knowledge of the chief traffic officers and that it will be their purpose scrupulously to carry it out.

"With respect to the question whether the resulting rates will be reasonable, it seems to me that there is little that need be said. In view of the nature of the case and the circumstances under which it arises, there is no occasion for the presentation of rate comparisons such as are usually resorted to for the purpose of demonstrating the reasonableness of particular rates. We are not dealing here with particular rates but with the rates of the railroads as a whole. In my judgment, the reasonableness of the proposed increases is sufficiently established by the circumstances that give rise to them. They are requested only because of unavoidable increases in the costs of railroad operation. In other words, the proposal does no more than try to take care of additional costs of operation which were not in contemplation when the existing rate levels were established.

"To justify the reasonableness of the proposed increases, therefore, I think it sufficient to rely upon the testimony and exhibits presented by Dr. Parmelee. However, I would add the observation that economic conditions are now such that industry, including agriculture, can well bear the relatively small addition to transportation costs here proposed."

Passenger Traffic Can Bear Increases

The addition of 10 per cent to the special bases of fares will still leave them generally not in excess of the maximum rates prescribed in Docket No. 26550, Mr. Siddall testified. The maintenance of these round-trip fares, in addition to the many other special fares, including commutation, he said, reduces the average revenue per passenger mile. This average is also affected by the necessity of circuitous lines meeting the fares of the short rate-making lines. Commutation fares are customarily made on a rate per mile materially less than the basis fares authorized for other passenger traffic.

"For the year ended September 30, 1941," he continued, "the average revenue per passenger mile for all passenger traffic on Class I carriers was 1.754 cents, the lowest rate per mile of record. The average increase under the petition of the carriers therefore would be not more than 1.754 mills per mile. The Interstate Commerce Commission statistics, as published in their statements M-220 and M-250, show that for the year 1940 the average revenue per passenger mile in sleeping and parlor cars was 2.30 cents, and in coaches, including commutation, 1.51 cents. Similar figures for the first nine months of 1941 show that the average revenue per passenger mile in sleeping and parlor cars was 2.28 cents, and in coaches, including commutation, 1.51 cents. Even excluding commutation traffic, the average coach rate for the first nine months of 1941 was

only 1.64 cents. These figures for 1940 and for the first nine months of 1941 are so close that it is fair to assume that for the year 1941 the average revenue per passenger mile was the same as the average revenue per passenger mile for 1940. Thus, an increase of 10 per cent would mean that the increase for sleeping and parlor car traffic would be but 2.3 mills per mile and the increase for coach travel but 1.51 mills per mile.

"For the year ended September 30, 1941, the revenue passenger miles on Class I carriers were 27.5 billion, or in excess of the revenue passenger miles in 1930 which were 26.8 billion. But the revenue for the year ended September 30, 1941, was only \$483,568,775, whereas in 1930 the railroads secured revenue of \$728,487,762 for handling fewer passenger miles. They performed 757 million more revenue passenger miles in the year ended September 30, 1941, but received 245 million less dollars for performing that service. Comparing the 1941 period with 1930, we find the railroads handling 2.82 per cent more passenger miles for 33.62 per cent less revenue. The service rendered in the 1941 period unquestionably was far superior in many ways to the service given in 1930. An increase of 10 per cent in the average rate earned in 1941 would lift the average rate to only 1.929, which is about the same as the average rate of 1934 and 1935, but is less than that earned in 1933. It would be 29 per cent less than the 1930 rate. Judged by any standard, the present passenger fares, increased 10 per cent, would not be in excess of just and reasonable fares.

"In the judgment of the passenger traffic officers, the passenger traffic for the coming year will be at least as great as it was in 1941, with the result that the carriers will be able to secure the 45 million dollars which it is estimated will accrue from the proposed increase. The conditions which the commission stressed at length in its report in the Passenger Fare Case of 1936 have been so changed that there seems to be little doubt that the traffic will continue to move at the present volume under the proposed increased fares. Business and economic conditions are much more favorable than they were at the time the record in that case was made. The curtailment of the production of automobiles, the restriction on the sales of tires, and the great increase in military traffic are among some of the many facts which are so well known that it will serve no useful purpose to detail them upon this record. It is therefore my judgment, and I know that of the carriers' officers, that on account of the radical change in conditions since the reductions in fares were made, passenger traffic can bear the proposed increase of 10 per cent in the fares and thus contribute something toward the wage burden which has been laid upon the railroads."

Shippers Have Ideas for Increasing Revenues

During the cross-examination of railroad witnesses and the testimony of shippers, the latter introduced several alternative suggestions for increasing freight revenues. John S. Burchmore, counsel for the National Industrial Traffic League, cross-examined Mr. Cleveland upon the feasibility of eliminating all land grant rates. Mr. Burchmore said that estimates as to the amount of revenue which the railroads would gain if the government paid commercial freight rates vary from 20 to 180 million dollars.

Another shipper reasoned that since the "earnings" average \$100 per carload, a \$10 increase per carload would give the carrier 420 million dollars on an expected 42,000,000 carloads, or more than enough to

cover the wage increase. Another was of the opinion that if all rates were placed upon the reasonable basis already established by the commission, they would produce the revenue sought. Still another felt that if every rate was increased slightly less than 1½ cents per 100 lbs., the increase in revenue would be greater than that estimated under the railroads' proposal.

Mr. Aitchison asked Mr. Cleveland why the railroads did not restore the reasonable rates recommended by the commission. Mr. Cleveland replied that the railroads need the money now and cannot wait until they have studied the rate in-structure and its relation to the competitive situation.

J. H. Hunt, secretary and treasurer of the American Short Line Railroad Association, testified on behalf of the members of that association and in support of their petition for authority to increase their rates as outlined in the petition of the Class I carriers. Mr. Hunt introduced a 31-page statistical exhibit showing the revenues and expenses of the members of this association.

Trucks Want Competitive Rates Raised

American Trucking Associations, Inc. intervened through its secretary Chester G. Moore, and asserted that if rail and express freight rates are increased as a result of these proceedings, the majority of motor carriers propose to file with the Commission tariffs reflecting comparable increase on the traffic handled by them for the reason that the present and prospective increases in the cost of conducting the motor carrier business make it impossible for many, if not all, of the motor carriers to continue to operate at the present rate level. "We believe," Mr. Moore testified, "that many of the rail rates upon articles which form the chief traffic of truck carriers are unreasonably low and in many cases non-compensatory to the railroads. Many of the rates which we have maintained in the past are below and in some cases considerably below, rates which we would maintain were it not for the low competitive rail rates. If time permitted, it would be our position that rates upon manufactured articles, in both carload and l.c.l. quantities, particularly the latter, should be increased much more radically than proposed by the railroads."

State commissions and western farm spokesmen consumed better than a day in testifying against proposed increases on agricultural products. D. L. Kelley, rate expert of the South Dakota Utilities Commission was opposed to any increases and particularly increases on grain and live stock. He contended that any rise now "would strangle" the movement of farm products from his state. George Ballif, head of the recently organized department of business regulations of Utah, contended that increased rates will "deplete an already insufficient family income."

In a separate hearing before Examiner Paul O. Carter, L. F. Orr, traffic manager of the Pet Milk Co., who represented the evaporated milk interest said, "We think that any increase the commission may find necessary should be of a temporary nature and controlled by an expiration date. If these rates were made permanent, they would injure the railroads and shippers alike."

Because of the method of applying the proposed increases to bituminous coal and coke, shippers of these commodities, presented many objections. For the most part they objected to changes in differentials brought about when the increases are applied to certain territories in differing amounts. In applying the proposed rate increases, the present western boundary of the Eastern zone which includes the west bank of the Miss-

issippi river, for example, will be shifted eastward to the Indiana-Illinois state line.

Among the coal interests intervening was the National Coal Association which was opposed to any increase in coal rates. It took the position that if an increase is made it should be temporary. The Wisconsin Manufacturers Associations during the hearing on coal rates, endorsed a temporary increase in all rates.

The California Deciduous Growers League objected to increased rates because, due to marketing conditions, the increase cannot be passed on to the consumer. H. E. Cole, chairman of the League's traffic committee said that the added cost to the members of the League would be large when one considers that fruits from California moved an average of 2,970 miles in 1941 while all fruits and vegetables transported by rail in the United States moved only 1,400 miles. The average freight revenue per car of fruit, he said, was \$600 in 1941, or 35 per cent of the sale price of \$1,700.

Frederick V. Waugh, assistant administrator of mar-

keting of the Department of Agriculture, testifying on behalf of the secretary of agriculture, doubted the need of a 10 per cent increase in rates, and, he said, questioned the need for any increase in rates because with a larger volume of traffic, greater revenues will offset increased expenses. The railroads, he continued, should prove that they must have the increase. He contended that the increase in wages and operating expenses amount to only 6.8 per cent of the 1940 revenue. Mr. Waugh also testified that agricultural products should be exempted if any increase in rates is granted because rate increases contribute to inflation and agriculture is least able to withstand it. He also contended that increased rates will cause higher food prices and, since these are used in quantities by the armed forces, will increase the cost of the war. Cross examination by Judge Fletcher showed that farm income has been increasing, amounting to about 11.6 billion dollars in 1941 compared with 9.1 billion dollars in 1940 and an all time high of 14 billion dollars in 1919.

Communication . . .

How It Feels to Ride a Train During a Bombing Raid

[The *Railway Age* has received the following letter from a British metallurgist describing in vivid language the fears and surmises of a railroad passenger en route during major enemy bombings.—EDITOR.]

DERBY, ENGLAND

TO THE EDITOR:

The public's fortitude in the Battle of Britain has received attention from journalists, but mention is seldom made of the railroad staffs and passengers who may have a particularly difficult time during air raids. The London terminal stations were in the midst of the bombing, but there—as all along the lines—trains continued to be loaded and run, whatever the efforts of the enemy. Eerie journeys were made at that time. One moonlight night I remember sitting in a train in the station. The loud-speaker ominously issued a special announcement that passengers must take particular care to draw the blinds across the windows and prevent light showing. The train moved off, and owing to slight damage on the direct line, pursued a circuitous route out of and around the city before resuming the track to the north.

A signal held us up near Walsall, and simultaneously the car lights were switched off and the quietness was suddenly broken by the howl of the local warning sirens. Soon the journey was resumed at reduced regulation speed, and we skirted the great industrial center. White flashes now came streaking from the edges of the blinds, so a soldier rolled the latter up. There before us lay the panorama of a city being bombed and defending itself. Great white diffusing flashes indicated the booming anti-aircraft guns; up in the sky an irregular but continuous pattern of fat, dull-red twinkling stars showed the bursting shells; at ground level the outbreak of fires revealed where the invisible enemy had left his mark. We crept on near a magnificent target in the shape of a great aircraft factory, but this anxious zone was safely crossed and before many miles the danger area ran out, the lights came on and the delayed train scampered away at normal speed.

One day last winter attendance at a war committee took me up to London, and rather unexpectedly there was no daylight alarm. Consequently it was with some content that I boarded an evening train for the north. After about an hour's travel darkness had fallen and a station was reached where there was a wait for change of trains. Masses of parcels on the platforms were being dealt with by the porters in the comforting glow of the specially-permitted lighting. Then suddenly about 6 p. m., all

was gloom—the lights were turned off. Then the local sirens howled; almost immediately the German planes droned over . . . and my ghost train crept into the station. All its lights were out and there seemed to be very few passengers in the corridor coach which I entered.

Soon after settling down in a dark empty compartment, the train proceeded at reduced speed, and after some time a signal brought us to a stop. The quietness now made evident the "oum-oum-oum" of a procession of Nazi planes overhead, and then from not far away came the bump and the boom of a heavy bomb explosion. Thinking of flying glass I timorously placed one of the seat cushions before the window, propped myself against it and stretched out along the seat to await events.

Almost at once the compartment door was opened, and a voice behind a pocket torch asked whether there was any room. The nerve-frayed newcomer talked of the advantages of companionship during travel, and together we discussed the trials of the times. When eventually the train did move, it crossed over to the local track. This probably meant that the express track had been damaged, but at least we were making some progress.

About 10 p. m. my companion got out and a soldier in full kit took his place in the darkness. The train dragged on. There was another long stop with the sound of more near bombing, and eventually we drew into a little wayside station. When passengers for a nearby town were called out by the assembled officials, it was obvious that our track to this city was broken. After another long wait it was evident that a way round had been arranged and an engineer who knew the new line procured. So we crawled along a most unusual route and arrived at stations where our train must have been a curiosity.

It was now 4 a. m., the full "red" danger warning was still in force, but my home town was only a few miles away. Would I arrive there to find it being bombed? The answer came with the lights! When half a mile from my station, and seven hours behind schedule, we ran out of the danger zone and the compartment was illuminated. My soldier companion found me reclining on my arrangement of cushions and (not appreciating my earlier fears) marvelled at a new way of securing comfort. As I left the station another traveler remarked that it had been a curious journey, and quietly agreeing with him I set out on the two mile walk to my home.

METALLURGIST.

THE OCEAN STEAMSHIP COMPANY OF SAVANNAH, an affiliate of the Central of Georgia, discontinued all passenger service effective December 20, 1941. This line—known as "The Savannah Line"—operated passenger and freight services between Savannah, Ga., New York and Boston, Mass.

NEWS

Sees a Million Loadings by May

SPAB thinks roads can move such traffic if they get 45,000 new cars in 4 months

Estimating that weekly carloadings will reach a level of about one million cars as early as May this year, the Supply Priorities and Allocations Board last week authorized the Office of Production Management to grant priorities for the construction by that time of 36,000 freight cars in addition to the 9,000 which are expected to be built this month. The program was recommended by Leon Henderson, director of OPM's Division of Civilian Supply, and Joseph B. Eastman, director of the Office of Defense Transportation; and, as SPAB sees it, the cars thus provided would "just permit the roads to meet this peak at full operating efficiency."

As indicated above, the 36,000 cars would be in addition to January's 9,000. They would be built during February, March and April; but the program thus authorized "implies no commitment for additional new equipment later in the year." As to locomotives, OPM is authorized to grant priorities for the continued production through April of locomotives "now on order or now scheduled for production for stock, consisting of 248 steam locomotives, 58 electric locomotives, and 620 Diesel locomotives."

In the freight car program preference will be given "to types needed to transport military equipment"; while the locomotive program provides that those built for stock "be of a type and size suitable for military or foreign use, and that Diesel locomotive production must not interfere with deliveries of Diesel engine crankshafts for military use."

Meanwhile, SPAB, as its announcement put it, also recognized "the necessity of keeping railroad ways and structures in serviceable condition," and has requested OPM to present within two weeks from January 2, estimates of materials that would be needed for this purpose during the first quarter of 1942. It also asked OPM to present at the same time estimates of the material required for rolling stock needed "for military, lend-lease and other exports."

While its present action, as stated in the foregoing, involves no commitment beyond April 30, SPAB has nevertheless asked Director Eastman of ODT to present a report "on materials which the

entire transportation industry will need in the last nine months of 1942 after all possible conservation measures have been taken." Meantime it is estimated that materials required for the three-months building and repair programs outlined above would include 1,413,893 tons of steel, 353,637 tons of cast iron, 19,985 tons of various non-ferrous metals, and 570 tons of rubber.

SPAB's action, the announcement said, came out of a recognition of the fact that "the war program will make heavy demands on the nation's railway transportation system." Moreover, SPAB held "that the new war program will presently create shortages in steel castings, and that it is hence advisable to get the railroads' essential requirements produced as soon as possible before the heavier military demand begins to be felt." The provision of plates for the railway program is not expected to interfere with production for military uses; since the required sizes (widths no greater than 48 inches) "can be rolled on strip mills whose capacity will be available due to curtailment of auto production."

A couple of days before the SPAB announcement a statement had come from OPM's Priorities Division, announcing that producers of railroad equipment who have been operating under Preference Rating Orders P-8, P-20 and P-21 will continue to receive the same assistance during this year's first quarter. Those three orders which would have expired December 31, have been extended through March 31. P-8 covers priorities for freight-car construction; P-20 locomotive construction; and P-21 repair and rebuilding of locomotives. All three extend a preference rating of A-3 for materials involved.

Bill Would Preserve Seniority of Railroaders in Armed Forces

Senator Wheeler, Democrat of Montana, has introduced S. 2174 to provide for "the execution and observance of agreements for the preservation and accumulation of seniority of employees of carriers during their service in the armed forces of the United States."

Would Make Tire Stealing a Federal Offense

Representative Cochran, Democrat of Missouri, has introduced H. R. 6311 to make the theft of tires and tubes a federal offense "during any period during which restrictions on the sale or use of tires or tubes are in effect." Maximum penalty would be \$1,000 fine or a year's imprisonment, or both.

Mediation Board Is Well Pleased

Feels cozy about rr. labor relations, but favors more use of arbitration

Reporting for the fiscal year ended June 30, 1941, the National Mediation Board promotes the idea of settling disputes through mediation and arbitration instead of emergency-board proceedings, asserting that the reports of the four emergency boards created during the year under review "should clearly indicate to both the carriers and their employees that even though arbitration is not compulsory under the law, no more was accomplished through a declination to arbitrate and the subsequent appointment of an emergency board than would have been accomplished in settlements of the disputes in an orderly manner through mediation and arbitration." The emergency-board proceedings thus cited do not include the recently-settled case involving the general wage increases and the vacations-with-pay award; those issues, except for the vacations-with-pay dispute which was later merged into the larger proceeding, arose toward the close of the fiscal year and thus were not formally before the Mediation Board during the period covered by the present report.

The four emergency boards appointed during fiscal 1941 dealt in turn with the hours-of-work-per-week dispute between the Railway Express Agency, Inc., and the Brotherhood of Railway Clerks; the general wage dispute on the Rutland; the wage dispute involving Duluth, Minn., ore-dock employees of four railroads; and the dispute involving train and service employees of the Atlanta, Birmingham & Coast. In the latter three cases the emergency boards turned their hands to mediation and effected settlements of the controversies; while recommendations of the emergency board in the Express Agency case were accepted. Reflecting a point of view like that of the Mediation Board's aforementioned expression, the emergency boards in the ore-dock-employees case and the A. B. & C. case questioned the wisdom of carrying to emergency-board proceedings disputes wherein no great principles were involved.

The Mediation Board's sales talk for mediation and arbitration, especially the former, ran throughout the report. "The board," it said in one place, "considers

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Deplores Heat on Transport Board

Fletcher doesn't like injection of body into territory rate fight—Lauds Eastman

Candid opinions on (1) congressional efforts to give the new Investigation & Research Board the umpire's cap in the inter-territorial freight rate fight; (2) the appointment of Joseph B. Eastman as transportation "czar" and (3) the weakening of the Railway Labor Act by the unions' recent flouting of the Emergency Board's recommendations mark the address of Judge R. V. Fletcher, vice-president, Association of American Railroads, before the Central Railway Club of Buffalo, N. Y., on January 9. The speaker disapproved (1); liked (2) and was quite critical of (3).

Noting that certain Congressmen have urged the research board to investigate the interterritorial rate question, Judge Fletcher declared that this is clearly the task of the Interstate Commerce Commission; that any report by the Board cannot command a higher degree of respect and confidence than a report on the subject by the I. C. C. Further, he asserted, "Such a report by the Board, whatever may be its conclusions, may well provoke so bitter a controversy and arouse so much ill-feeling that other reports on the special subjects which Congress had in mind will be received with a certain degree of distrust."

On the whole, the speaker believes the new Board should not be led away from its proper objectives into tasks already entrusted to adequate agencies. Expanding on the question of special boards vs. regulatory bodies, Judge Fletcher said:

"My long experience in the domain of transportation convinces me that no agency of government commands the confidence of the country and the Congress to a greater degree than the Interstate Commerce Commission. Boards, special authorities, investigating committees and agencies of various kinds come and go, but the Interstate Commerce Commission pursues the even tenor of its way, secure in the esteem of the public—an esteem that grows out of a half century of honorable and intelligent handling of matters over which it has control. Not infrequently, it is the subject of criticism by impatient partisans of one sort or another, in and out of Congress. Now and then it is accused of taking too much time to deliberate; occasionally, not often, someone calls it railroad-minded, or motor-minded, or water-minded. But the Commission keeps right on doing the best it can, serene and unafraid, an example of stability and impartiality from which other administrative bodies may well learn a number of wholesome lessons."

The A. A. R.'s legal chief expressed pleasure at Commissioner Eastman's appointment as Director of Defense Transportation and was careful to point out that "this arrangement does not connote government ownership or control in the ordinary sense of these terms" . . . that unless things get much worse "we are not to have

a repetition of the 1918 experiment." Of the President's choice he declared: "As I see it, the chief endeavor of the Director of Defense Transportation will be to use his authority, his wide experience, his untiring industry and proven ability in making sure that the various transportation agencies march in step with the war effort of the nation." And elsewhere: "It is a fortunate circumstance that there was available for the important and delicate task of Director of the Office of Defense Transportation one who enjoys so completely the confidence of the country, including those who operate and control the essential properties by which transportation is carried on."

Judge Fletcher was of the opinion the Railway Labor Act has been definitely weakened by the action of the unions in refusing to conform to the Emergency Board's recommendations. "We have been told over and over by persons concerned with labor relations that the Railway Labor Act of 1926, as amended in 1934, furnished a model for labor legislation affecting other lines of industry. This Act, with its provisions for conferences, mediation, arbitration and fact finding boards, furnished an ample cooling period and was believed to provide practical insurance against strikes or other interruptions of operations. But the recent experience of the railroads with the machinery of this Act has shaken the confidence of the country in its efficacy. The recommendations of a fact finding board, composed of unusually capable men selected by the President, issued after extended hearings and arguments, and calling for an increase in wages of \$270,000,000, was rejected by the employees and accompanied by a threat of strike, which would have paralyzed our defense effort, just at the time the barbarous and treacherous Japs struck their cowardly blow at Pearl Harbor. As the President of the United States wisely stated, a railroad strike at this time was unthinkable. And so it came about that a wage increase of \$311,000,000 was negotiated, as a result of protracted conferences in which the President and the members of the Emergency Board participated."

Mid-West Board to Meet January 23

The Mid-West Shippers Advisory Board will hold its annual meeting at Chicago on January 23 instead of on January 8.

Railroad Credit Corporation to Make Distribution

A liquidating distribution will be made by the Railroad Credit Corporation on January 31, of one per cent of the fund as of December 31, 1941, amounting to \$734,609. Of this amount \$656,051 will be paid in cash and \$78,558 will be credited on carriers' indebtedness to the corporation. This will bring the total amount distributed to \$63,176,442, or 86 per cent of the original fund contributed by carriers participating in the Marshalling and Distributing Plan, 1931, according to E. G. Buckland, president of the corporation. Of this total, \$34,994,454 will have been returned in cash and \$28,181,988 in credits, he pointed out.

Eastman Opposes Moving the I.C.C.

Necessary contact with defense agencies and Congress not easy except in D. C.

The removal of the Interstate Commerce Commission from Washington, D. C. would "greatly impair" its efficiency and increase its costs of operation—so Joseph B. Eastman, I. C. C. chairman and newly-appointed director of the Office of Defense Transportation, told a House buildings and grounds subcommittee on January 5. Mr. Eastman appeared as one of the government bureau chiefs who have been called before the committee to testify as to the possibilities of moving various agencies and bureaus out of Washington to relieve the acute housing shortage both in government office space and in the matter of homes for federal help, due to wartime conditions.

The sub-committee is making an independent study of the shortage of government office space at the same time that the Bureau of the Budget is issuing orders for the removal of various agencies and drafting orders for the transfer of others. Two weeks ago the Bureau of the Budget ordered the transfer of the Railroad Retirement Board to Chicago and 11 other agencies to other cities.

Mr. Eastman appeared on behalf of the commission and submitted a brief against the idea of moving out of Washington which was prepared by his agency and transmitted to the Bureau of the Budget last June when the talk of moving the commission and other agencies became so rife that the House interstate and foreign commerce committee took notice of it and requested the President to not move the I. C. C.

In answer to queries from members of the committee, Mr. Eastman declared that in normal times the commission could not be moved from Washington without an act of Congress as the organic law creating it specifies that "the principal office of the commission shall be in the city of Washington where its general sessions shall be held." However, he went on to point out that in these times and in view of the war emergency powers of the President, he did not know whether it could be moved by Presidential edict or not.

In reply to a question regarding the possibility of government ownership or control of the carriers during the war, Mr. Eastman told the committee that the railroads "had handled defense traffic very efficiently, indeed." Asked about the question of whether he had given any thought to working some of the commission's staff on a 24-hour basis, the former chairman replied that he had not, but that he did not feel that it would be at all practical as far as the public was concerned. Moreover, he was of the belief that any order for the removal of the commission would cause a great many employees to resign and attempt to find work in other Washington offices.

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42.2 Million Cars Loaded in 1941

Total was 16.3 per cent above 1940's and 24.7 per cent above 1939

Loading of revenue freight on the railroads of the United States in 1941 totaled 42,284,927 cars, according to the Association of American Railroads. This was an increase of 5,927,073 cars or 16.3 per cent above 1940, and an increase of 8,373,429 cars or 24.7 per cent above 1939.

Total loadings by commodities in 1941 compared with 1940 follow:

	1941	1940	Per Cent Increase
Grain and grain products	2,022,419	1,834,593	10.2
Live stock	650,490	685,282	5.1*
Coal	7,590,002	6,819,614	11.3
Coke	677,634	548,686	23.5
Forest products ..	2,184,987	1,799,650	21.4
Ore	2,682,242	2,148,428	24.8
Merchandise, l.c.l.	8,041,367	7,679,389	4.7
Miscellaneous ..	18,435,786	14,842,212	24.2
Total	42,284,927	36,357,854	16.3

* Decrease.

Loading of revenue freight for the week ended January 3 totaled 674,374 cars, the Association of American Railroads announced on January 8. This was an increase over the previous week of 67,848 cars, or 11.2 per cent. An increase of 60,203 cars, or 9.8 per cent, above the corresponding week in 1941, and an increase of 81,449 cars, or 13.7 per cent, above the same week in 1940.

Loading for the week ended December 27 totaled 606,526 cars. This was a decrease of 192,171 cars or 24.1 per cent below the preceding week, an increase of 61,219 cars or 11.2 per cent above the corresponding week in 1940 and an increase of 58,462 cars or 10.7 per cent above the same week in 1939.

Revenue Freight Car Loading

For Week Ended Saturday, December 27

Districts	1941	1940	1939
Eastern	133,265	125,545	128,062
Allegheny	143,642	126,536	121,236
Poconchos	32,799	33,046	34,832
Southern	87,433	76,934	78,557
Northwestern ..	71,060	64,033	63,366
Central Western	92,978	80,931	83,353
Southwestern ..	45,349	38,282	38,658
Total Western ..	209,387	183,246	185,377
Total All Roads	606,526	545,307	548,064
Commodities			
Grain and grain products	29,386	21,983	26,440
Live stock	9,698	8,682	9,959
Coal	112,909	113,618	128,360
Coke	13,176	11,719	11,585
Forest products ..	26,487	24,191	19,707
Ore	11,459	10,870	8,291
Merchandise l.c.l.	123,136	120,346	117,347
Miscellaneous ..	280,275	233,898	226,375
December 27 ..	606,526	545,307	548,064
December 20 ..	798,697	697,755	651,392
December 13 ..	807,225	736,340	678,132
December 6 ..	833,375	738,513	683,973
November 29 ..	866,189	728,525	685,496
Cumulative Total, 52 Weeks ...	42,284,927	36,357,854	33,911,498

In Canada.—Carloadings for the week ended December 27 were 45,031, as compared to 40,358 in the last week of 1940 and 61,760 in the previous week, according

to the weekly statement of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
December 27, 1941....	45,031	25,875
December 20, 1941....	61,760	32,491
December 13, 1941....	62,886	31,953
December 28, 1940....	40,358	23,683
Cumulative Totals for Canada:		
December 27, 1941....	3,139,447	1,558,927
December 28, 1940....	2,812,597	1,301,178
December 30, 1939....	2,549,449	1,129,831

Daylight Saving Time

Senator Wheeler, Democrat of Montana, has introduced S. 2160 to authorize the President to advance or retard the standard time of each zone or any part thereof, provided that in no case shall the time be advanced more than two hours. The President's authority would continue dur-

440 Millions Net In Eleven Months

Operating ratio rising rapidly—Was 63.87 in Sept., 69.84 in Oct. and 73.44 in Nov.

As noted briefly in the *Railway Age* of January 3, the Class I railroads in the first 11 months of 1941 net income after interest and rentals of \$439,983,723, while the 11-months net railway operating income, before interest and rentals, amounted to \$916,788,525. The Bureau of Railway Economics' summary tabulation of the results for November and the 11 months follows:

CLASS I RAILROADS—UNITED STATES

Month of November

	1941	1940	1930
Total operating revenues	\$457,011,853	\$375,498,853	\$394,261,533
Total operating expenses	335,614,115	259,517,849	295,812,115
Operating ratio—per cent	73.44	69.11	75.03
Taxes	40,585,778	33,690,328	25,418,475
Net railway operating income	68,764,844	71,560,226	61,175,416
(Earnings before charges)			
Rate of return on property investment	3.18	3.34	2.88
Net income, after charges (estimated)	30,064,315	30,809,337	*
Eleven Months Ended November 30			
Total operating revenues	\$4,867,139,844	\$3,916,064,618	\$4,906,580,018
Total operating expenses	3,311,643,147	2,824,024,320	3,636,468,116
Operating ratio—per cent	68.04	72.11	74.11
Taxes	514,630,465	369,814,166	328,645,340
Net railway operating income	916,788,525	603,692,473	820,214,052
(Earnings before charges)			
Rate of return on property investment	3.74	2.49	3.38
Net income, after charges (estimated)	439,983,723	138,517,515	*

* Net Income not reported monthly prior to 1932.

ing the war and for a period not to exceed six months thereafter.

In the House, Representative Lea, Democrat of California, has introduced two daylight saving bills—H. R. 6313 which would authorize the President to establish daylight saving time by advancing standard time by not more than one hour, and H. R. 6314 which would advance standard time by one hour for the duration of the war and for a six months thereafter.

Senate Confirms Johnson as I. C. C. Commissioner

The Senate on January 7 confirmed the reappointment of J. Monroe Johnson of South Carolina as a member of the Interstate Commerce Commission for a seven-year term expiring December 31, 1948.

Jones Is Named to SPAB

President Roosevelt has named Jesse Jones, Secretary of Commerce and Federal Loan Administrator, to be a member of the Supplies, Priorities & Allocations Board to handle the financial angle of the problems of war production which are now confronting that agency.

At the same time the President has sent to the Senate the nomination of Charles T. Fisher, Jr., of Michigan, to be a member of the board of directors of the Reconstruction Finance Corporation for the unexpired term of two years from January 22, 1940; in place of Carroll B. Merriam, deceased.

As shown above, the 11-month gross was \$4,867,139,844, compared with \$3,916,064,618 in the same period in 1940, and \$4,906,580,018 in the 11 months of 1930, an increase of 24.3 per cent in 1941 above 1940, but 0.8 per cent below 1930. Operating expenses in the 11 months amounted to \$3,311,643,147, compared with \$2,824,024,320 in the corresponding period in 1940, and \$3,636,468,116 in the same period in 1930—17.3 per cent above the former but 8.9 per cent below the like period in 1930.

Class I roads in the 11 months paid \$514,630,465 in taxes, compared with \$369,814,166 in the same period in 1940, and \$328,645,340 in the same period in 1930. For November alone, the tax bill amounted to \$40,585,778, an increase of \$6,895,450 or 20.5 per cent above November, 1940. Twenty-eight Class I roads failed to earn interest and rentals in the 11 months of 1941, of which eight were in the Eastern district, three in the Southern district, and 17 in the Western district.

The November gross was \$457,011,853 compared with \$375,498,853 in November, 1940, and \$394,261,533 in November, 1930. Operating expenses totaled \$335,614,115 compared with \$259,517,849 in the same month in 1940, and \$295,812,115 in November, 1930.

Class I roads in the Eastern district in the 11 months had an estimated net income of \$244,697,241 compared with \$138,028,409 in the same period last year. Those same roads in the 11 months had a net railway

(Continued on page 180)

Travel Hits a Record in N. Y.

Pullman trade runs once more in two layers as customers flock again to trains

Railroad stations in New York city looked like 1921, or thereabouts, during the Christmas and New Year's holiday period just passed. And harassed operating departments had to dig deep down to find space for customers.

The carriers didn't turn any passengers away, but a few patrons who let Pullman reservations go until the last minute rode in coaches and some who are used to drawing rooms rode in upper berths. One passenger representative said that "after they learned what was what, some of them took the hint and just asked for an 'upper' first—more chance of getting it." Again, in requesting statistics on extra trains and cars, in order to gage the volume of passenger business compared with previous years, a *Railway Age* inquirer was told by

crease in volume (excluding movements of armed forces not on furlough) of at least 20 per cent over the corresponding holiday period of last year. And it will be remembered that last year's holiday season itself was a boom period, with gains up to 50 per cent over previous years. In effect, therefore, the percentage increases must be pyramided to show how far the roads have progressed from what they had come to accept as normal passenger offerings.

Military furlough travel, "defense money," uprooted workers going back home for the holidays and cancellation of air flights for several days were factors in the traffic increase repeated from last year. In addition, this season a Greyhound bus strike which started in Cleveland, Ohio, early in December, grew serious in northern New York and Pennsylvania on December 23 and ended on December 31, added many coach passengers to the totals of the New York Central, Lackawanna, Erie and Lehigh Valley. A factor in last season's increase not accountable this year was a special holiday reduction in round-trip first class fares and the fact that the basic coach fare had been reduced under the previous year. This year no reduced fares were available, the basic rate remained the same and the federal transportation tax took an extra 5 per cent out of the customer's pocketbook. Furthermore except for the extreme north, snow conditions did not affect automobile travel this year.

New York Central ticket sales at Grand Central terminal between December 23 and January 5 were 23.5 per cent above the corresponding period of last year, while an average increase in sales at other large points on the system of more than 30 per cent would indicate that inbound traffic into New York increased more than outbound. Between December 18 and January 5 this road handled 250 extra trains in and out of Grand Central, or about 5 per cent more than last year. The Pennsylvania estimates that its New York volume was up about 30 per cent over last year, as does the New York, New Haven & Hartford. Grounded planes between New York and Boston, Mass., on December 24 and 25 gave the latter road a big boost in high-class traffic. The "Yankee Clipper" ran in three sections on December 24, for the first time in many years.

The Delaware, Lackawanna & Western, which serves no army camps, nevertheless enjoyed an increased patronage of between 25 and 30 per cent. The bus strike brought the road a large number of over-night coach passengers. It might be noted that this road sold more tickets out of Scranton, Pa., on December 24 than any day in its history. The Erie and Lehigh Valley also enjoyed material traffic increases over last year. Central of New Jersey business—which is short-haul—was up 7 per cent. Baltimore & Ohio patronage was up over 30 per cent.

Western Pacific in a New Home

On January 1, the executive and general offices of the Western Pacific in San Francisco were moved from the Mills building to new and larger quarters in the Western Pacific building at 526 Mission street.

T. P. & W. Service To Be Maintained

Adequate force recruited to continue operation—Some violence reported

The Toledo, Peoria & Western is still operating trains to care for the local service on its lines, although since the night of December 28, as reported in the *Railway Age* of January 3, it has been fighting a strike called by the Brotherhood of Locomotive Firemen and Enginemen and the Brotherhood of Railroad Trainmen. The strike was called after mediation efforts failed and the company announced its intention of placing new rates of pay, rules and working conditions in effect on December 29. The new rates of pay were increased in accordance with the recent National Mediation settlement for other railroads of the United States but the company has steadfastly refused to change the rules and grant as much overtime pay as requested. The unions have been seeking what they call "standard rules" similar to those on other roads.

The new rates of pay put in effect on the T. P. & W. are as follows:

	Per day (8 hours)	Overtime Per hour
Engineers	\$9.56	\$1.79
Conductors	8.36	1.57
Firemen	7.40	1.39
Brakemen	7.00	1.31

Some of the rules and working conditions placed in effect are briefly as follows:

Compensation, including overtime, is calculated on the old basis of 12½ miles per hour for the first 100 miles, and 25 miles per hour for mileage in excess of 100 miles, with the above rates as minimums, all as set forth in the railroad's schedule of rates of pay, rules and working conditions. No distinction is made between through, local or yard work.

The seniority rule as applied to assignment of men is substantially as follows:

"The management may from time to time designate the employee who is to fill each position or place where such employee is to be used. When the management deems that a permanent vacancy exists on a regularly scheduled run, the vacancy shall be advertised on the bulletin board for a period of five days to determine the man longest in service desiring to fill the vacancy. In selecting the employee who is to fill any position or place, the management will give consideration to ability, seniority, loyalty, personal habits and attentiveness to the best interests of the railroad, and shall not be limited to the men who bid therefor. If, in the judgment of the management, the said considerations other than seniority are substantially equal, the man longest in service shall have preference; however, the decision of the highest operating officer of the railroad shall be final."

The following is included in the Schedule under the heading of "Retention of Legal Rights:—"

"Nothing in this schedule shall be construed as depriving the railroad, or any employee of the railroad subject to this

If the ARMY or NAVY should get your seat

The railroads are meeting unusual requirements placed upon them by the National Emergency, including military movements. Consequently not all passenger equipment is available for Christmas holiday travel.

Thousands of travelers are being carried home for the holidays and every effort is being made to provide for everyone, but if the Army or Navy should get your seat, or you are inconvenienced in any way, we ask your patience and understanding.

**NEW HAVEN RAILROAD
NEW YORK CENTRAL SYSTEM
PENNSYLVANIA RAILROAD**

Three Trunk Lines Serving New York Placed This Announcement in Daily Newspapers

Officers of the three biggest roads serving the city that such figures would underestimate 1941's increase because "this year we had first class passengers going out of here in two layers—solid." It was a long time ago when 100 per cent Pullman occupancy was last achieved.

Some of the "tightness" of the car situation was unquestionably due to the fact that a large number of units—both Pullman and coach—have been in the service of the Army ever since our active entry into the war, making up the long trains that pass quietly and unheralded from camp to coast. But aside from this troop movement, civilian and armed forces on furlough alone would have put pressure on the available car supply. Most roads reported an in-

schedule, of the right to take any steps which may be provided by law for the protection of their respective interests."

Joseph B. Eastman, Director of the Office of Defense Transportation, wired the T. P. & W. on January 6, asking for arbitration of the wage and rules dispute and that the strikers be taken back without prejudice so that the limited embargo on freight shipments over the road may be lifted. Mr. McNear replied to Mr. Eastman's wire, pointing out that the railroad had repeatedly urged the appointment of an emergency board, which board, if it had been appointed, would have brought to light the facts and prevented the trouble now being encountered. The use of this orderly procedure would have averted the strike. The road made no effort to employ any men during the time that the strike was postponed, but immediately after the strike was called, it set out to recruit the men necessary to maintain the service and now have more men than are required. The road contended that to return all former employees to work without prejudice would be grossly unfair to new and loyal employees. Mr. McNear added, that if he can have assurance of the maintenance of law and order, the railroad will be able to restore service in full, including the handling of through traffic that is now being diverted to other lines.

The unions have established picket lines, particularly at the important terminal of the road at Peoria, Ill., and have preferred criminal charges against George P. McNear, Jr., president, H. A. Best, superintendent and Bruce Gifford, trainmaster, charging intimidation and coercion of employees to prevent formation of a local of the Brotherhood of Railroad Trainmen in violation of the Railway Labor Act. The information was filed at Peoria, Ill., by Howard Doyle, United States district attorney, on January 5 and the officials were released on \$2,500 bond each.

The management has advertised for train service men in local and Chicago papers and has been hiring operating workers since the date of the strike. Two or three trains daily have been operated since the strike, and at first, some of these were manned by crews selected from round-house hostlers, repairmen and company officials. Some of the new men hired are men of long experience on other railroads and some of them are men who left the service of the T. P. & W. in 1929, when members of the Brotherhood of Locomotive Engineers struck over a jurisdictional dispute concerning the shop workers on the line.

Although most of the traffic of the T. P. & W. is usually through traffic received from connections at one end of the line and delivered to connections at the other end, an embargo has been in effect since December 8. This embargo was later limited to apply only to through traffic, which now is routed via other railroads. The only traffic that the T. P. & W. has had to handle since that date, therefore, has been traffic picked up on its own lines or received from connections for delivery on these lines. This local traffic normally amounts to only about 25 per cent of the total traffic handled, and so far, it is re-

H. D. Pollard of the C. of G. Dies at 69

Henry Douglas Pollard, co-trustee of the Central of Georgia, with headquarters at Savannah, Ga., died in that city of a heart attack during the night of January 7, at the age of 69. Mr. Pollard was actively operating head of the road at the time of his death and served as its president and general manager in 1931 and 1932. Subsequently he became its receiver and upon transfer of the property from equity receivership to Section 77 became co-trustee in active charge of the physical property. With the exception of three years railroading in Brazil Mr. Pollard has been connected continuously with the C. of G. since 1898.

ported that satisfactory service on local traffic has been maintained.

Some violence has been reported, several men have been hurt, automobile tires of men going to work have been punctured by nails strewn in the road at the entrance to the terminal at Peoria, switches and switch lights have been tampered with, the rails have been greased on grades and rocks have been thrown at the trains which were operated, smashing locomotive headlights and windows and caboose windows. The violence culminated in threats against the train crew, followed by the stoning of the crew in the locomotive cab and then by the throwing of bottles of gasoline or benzine into the cab to burn the crew. Among those arrested at the scene of this attack was the chairman of the Brotherhood of Locomotive Engineers local. Because of this violence, all trains are now being preceded over the line by motor cars.

Following these attacks, the road applied in the Federal court for a temporary injunction restraining the employees from further action of violence, which was granted on January 3, the final hearing of which will come up January 8.

Ask Roosevelt to Take Over T. P. & W.

The Brotherhood of Locomotive Firemen & Enginemen has asked President Roosevelt to take over and operate the Toledo, Peoria & Western. At the same time Joseph B. Eastman, director of defense transportation, has asked the men on the road who have been involved in a strike since December 28, 1941, to return to work and the management to lift an embargo on freight shipments so that the issue involved may be arbitrated.

Grand Trunk Takes Over Refrigerator Lines

Effective January 1, 1942, all properties of the Chicago, New York & Boston Refrigerator Company, operating under the trade names of New York Despatch and National Despatch Refrigerator Lines, were acquired by the Grand Trunk Western, and J. M. Parramore, president and general manager of the Chicago, New York & Bos-

ton Refrigerator Company, was placed in charge of a separate dairy department of the Grand Trunk, as dairy traffic manager, with headquarters at Chicago.

First of New Fleet of "400's" Goes Into Service

On January 5 the Chicago & North Western placed in service the first train of its new fleet of "400" streamliners between Wyeville, Wis., and Rochester and Mankato, Minn. This train, which is steam-powered, includes a combination baggage-taproom-lunch counter car, coaches and a parlor car. Provision is also made for a nurses emergency room. As reported in the *Railway Age* of January 3, the remainder of the fleet which will have Diesel-electric locomotives, will be placed in service on January 12.

Stalled Auto Derails L. V. Train: Kills One

One passenger was killed and some 13 persons injured when Lehigh Valley passenger train No. 4, bound from Buffalo, N. Y., to New York crashed into a stalled automobile at a grade crossing near Ransom, Pa. (6.6 mi. west of Pittston), and was de-railed, at about 3 a.m. on January 4. The locomotive and first 13 cars of the 14-car train left the rails. Occupants of the car, unable to move it during a severe blizzard had left the car and claim that they were looking for a telephone to warn railroad authorities when the train bore down on the automobile.

The locomotive and first three cars, when derailed, followed the line of rail, but the fourth car swung about and tore part of the corner of the following steel coach. It was in the latter that the passenger killed was located.

I. W. C. Traffic Manager Gets I. C. C. Water Carrier Post

The Interstate Commerce Commission has appointed John F. Girault of New Orleans, La., as assistant director of the Bureau of Water Carriers to succeed Ernst Holzborn who resigned effective December 15, 1941. Mr. Girault has been associated with the government-owned Inland Waterway Corporation for a number of years and has been freight traffic manager of that company. The I. C. C. announcement said that he "is thoroughly familiar with transportation on the inland waterways of the country."

Supply Companies Withdraw Price Increases

Three manufacturers of railroad equipment accessories have withdrawn October price increases at the request of the Office of Price Administration, Leon Henderson, administrator, announced on January 5.

The companies and the products which have been restored to their former price levels follow: Westinghouse Air Brake Company, air hose and hose with fittings, gaskets, seats, and packing cups; Youngstown Steel Door Company, steel doors for freight cars; and Edna Brass Manufacturing Company, locomotive specialties. "It is this kind of cooperation that deserves public

commendation," Mr. Henderson stated. "These companies and others in their field are making very important contributions to price stability."

B. & O. Service to New York to Remain Unchanged

The change in operation of Baltimore & Ohio trains to New York whereby the B. & O., will give up its trackage rights over the Reading and Central of New Jersey and the latter roads will operate its equipments between Park Junction, Pa., and Jersey City, N. J., is one which will effect the passenger in no way. The new public timetable for the Reading-Central between New York and Philadelphia, Pa., to be effective January 11, continues to show the same number of trains of these roads and the B. & O. as heretofore. Only change is that the latter are now designated "B. & O. Route" and the former "Reading-Central of New Jersey Route." Train connection buses, will continue to serve B. & O. route passengers in New York city and between Newark, N. J. and Elizabeth.

Eastman Assumes New Post

Director of Defense Transportation Joseph B. Eastman has received his letter of appointment from President Roosevelt and is expected to announce the names of his staff this week. Mr. Eastman does not expect to have a large staff at the outset and is having a part of the fifth floor of the Interstate Commerce Commission vacated by the Bureau of Water Carriers so that he may have the space for his organization. The Bureau of Water Carriers has moved its offices from the fifth floor to a hearing room on the first floor of the commission building.

Meanwhile, Ralph Budd, defense transportation commissioner, has resigned, and a part of his staff is in the process of being transferred to Mr. Eastman's organization.

Club Meetings

The New England Railroad Club will hold its next meeting on January 13 at the Hotel Touraine, Boston, Mass., at 7:45 p. m. Professor Kent T. Healy, Yale University, will speak on "Railroad Policy of the Present Emergency." Dinner will be served at 6:30 p. m.

The American Association of Railway Advertising Agents will hold its annual meeting on January 16 and 17 at the Jefferson hotel, St. Louis, Mo.

The Traffic Club of Philadelphia, Pa., announces that, owing to war conditions which make it inadvisable for railroad and transportation officers to leave their headquarters, the annual dinner of the club, scheduled for January 20, will not be held. The usual monthly meeting of the club will, however, convene on January 19 at the Benjamin Franklin hotel.

Arnold is Silent on Railroad Trucking Activities

The annual report of the Attorney General which also contains a report of Assistant Attorney General Thurman Arnold in charge of the antitrust division, has been sent to Congress. Mr. Arnold's report

makes no mention of the question of railroad control of trucking lines, a subject on which he has been making several presentations to the Interstate Commerce Commission in recent motor carrier cases before that tribunal.

Discussing the question of monopoly, however, he does say at one place in his report that "the distribution of food in large cities is hampered by monopoly charges on transportation, distribution, protective local trade barriers, private pools to raise prices through marketing arrangements, and suppression of more efficient ways of distribution."

11 Months Results in Canada

In November the Canadian National had \$27,292,966 of operating revenue (up \$4,903,518 over 1940). Operating expenses were \$21,573,130 (a \$4,707,906 increase). Operating net was \$5,719,836 (up \$195,612). For eleven month, gross was \$276,365,487, expenses were \$216,017,596 and operating net was \$60,347,891—being increases, respectively, of \$52,575,069, \$30,961,040 and \$21,614,029.

The Canadian Pacific in November had \$20,207,692 for gross, \$15,006,465 for expenses and \$5,201,226 for operating net (being increases, respectively, of \$4,318,266, \$4,189,656 and \$128,609). In eleven months the C. P. R. had \$200,241,838 of operating revenues; expenses were \$159,375,052; and operating net was \$40,866,785. The increases, respectively, over the similar 1940 period were \$45,612,608, \$35,579,054 and \$10,033,554.

Reed in Charge of OPM Industrial Branches

Philip D. Reed, chairman of the board of the General Electric Company and deputy director of the Office of Production Management's Materials Division, has been appointed special assistant to OPM Director General William S. Knudsen and Associate Director General Sidney Hillman, in which capacity he will be in charge of industrial branches.

Under a recent Knudsen-Hillman order all industrial branches formerly in the Division of Civilian Supply and Division of Purchases are being set up as independent units reporting directly to the director and associate director. Chiefs of these branches will now report to Mr. Reed. Among the branches involved is the Automotive, Transportation and Farm Equipment Branch which was formerly under Director Leon Henderson of the Division of Civilian Supply.

U. P. Releases Stewardesses for War Service

The Union Pacific, the first American railroad to inaugurate registered nurse-stewardess service on its trains more than six years ago, will discontinue this service effective January 15 so that, as an 'all out' war measure, "these highly trained young women may be made available for more important duty," according to an announcement made by W. M. Jeffers, president, who also said:

"We will release these stewardesses, knowing full well the invaluable service

they have been performing on our trains, especially in the care of unaccompanied children and mothers with children, but with the scarcity of highly trained registered nurses, such as these stewardesses, we feel these qualified young women can be used to greater advantage in this great world crisis. There is nothing more important than a complete victory for the democracies, and we are hopeful the traveling public will accept the discontinuance of this service in the proper spirit." Mr. Jeffers added that he was hopeful the service could be restored after the war is won. The Union Pacific at present employs nearly 100 nurse-stewardesses, headed by a chief stewardess.

Timken Eliminates Demurrage

The Timken Roller Bearing Company, Canton, Ohio, is currently making a practice of holding no car over 48 hr. "It is a very easy thing to do," according to W. C. Sanders general manager, Railway division. "We simply make the head of every department in our various plants see to it that no car, either incoming or outgoing, is retained over 48 hr. [after which demurrage begins]. We have explained to our department heads that it is desirable to load and unload the cars in less than 24 hr. or, if possible, in 1 hr., because the cars are badly needed elsewhere.

"Furthermore, freight car storage is expensive. The average box car contains about 360 sq. ft. of floor space and from 3000 to 3500 cu. ft. of capacity. At \$5.50 demurrage per day, this amounts to 46 cents per sq. ft. per month. The average rental of space in common storage warehouses costs about 3 cents per sq. ft. per month. This includes a sprinkler system and heat."

November Locomotive Shipments

November shipments of railroad locomotives totaled 89 as compared with 102 in October and 86 in November, 1940, according to reports from builders to the Department of Commerce's Bureau of the Census. Shipments for last year's first 11 months totaled 874 locomotives, including 160 steam, 17 electric, 645 Diesel-electrics and 52 of other types. Comparable figures for the first 11 months of 1940 are 517 locomotives, including 127 steam, 370 Diesel-electrics and 20 of other types.

The foregoing figures include locomotives built for domestic service and for export, the separation on that basis having been discontinued because the publication of foreign trade statistics has been suspended for the duration of the war. As of November 30 the builders had unfilled orders for 1,022 locomotives, including 364 steam, 51 electric, 556 Diesel-electrics and 51 of other types. On November 30, 1940, there were unfilled orders for 285 locomotives, including 153 steam, 12 electric, 119 Diesel-electrics and one other type.

Data supplied by the Car Service Division, Association of American Railroads, on locomotive building in railroad shops show that four locomotives (all steam) were thus produced in November, 1941, as compared with two (one steam and one electric) in November, 1940. During last

year's first 11 months a total of 18 locomotives (16 steam and two electrics) were built in railroad shops, as compared with 74 locomotives (40 steam, 21 electrics and 13 "gas or Diesel") during the same period of 1940. On December 1, 1941, railroad shops had unfilled orders for 45 locomotives, including 25 steam and 20 electrics.

Study Board Keeps Promise to Start Rate Investigation

The Board of Investigation and Research, created by the Transportation Act of 1940, has appointed D. Philip Locklin to direct its study of the interterritorial freight rate problem.

As noted in the *Railway Age* of December 20, page 1054, the board recently made a commitment in that connection to the Senate committee on appropriations. The announcement of Dr. Locklin's appointment said that the study "will be made from a broad national point of view and will supplement rather than duplicate other analyses already completed or being carried on by other agencies of government."

Dr. Locklin is professor of economics in charge of transportation at the University of Illinois. He was principal economist in the Bureau of Statistics, Interstate Commerce Commission, in 1935, and he also has served as consultant to the National Resources Planning Board and as special expert for the Maritime Commission. In addition to contributions on transportation subjects to various economic journals, he is author of "Economics of Transportation," "Railroad Regulation Since 1920" and "Regulation of Security Issues by the Interstate Commerce Commission."

Would Give I. C. C. Power to Require Pooling of Revenues

Senator Reed, Republican of Kansas, has introduced S. 2163 to amend the Interstate Commerce Act to give the Interstate Commerce Commission authority to require the pooling of revenues derived from general rate increases. Similar provisions were in the Transportation Act of 1940 when it came from the Senate committee on interstate commerce as S. 2009; but they were removed by the Senate upon the suggestion of Chairman Wheeler of that committee.

The Reed bill would amend paragraph (1) of section 5 of the Interstate Commerce Act by adding the following: "Provided further, That whenever the commission is of the opinion, after hearing upon general application of carriers in any rate area or territory or group, or in the country as a whole, or upon its own initiative, after hearing, that increases in rates, fares, or charges should be permitted upon a percentage or other uniform basis because of the revenue needs of the affected carriers, considered collectively, it may provide for the pooling or division of the avails of such increases, or any part thereof, among the affected carriers so as to enable, to the extent reasonably practicable, each of them to afford adequate transportation service, giving due consideration, among other things, to the efficiency with which the carriers concerned are operated, the amount of revenue required to pay

their respective operating expenses, taxes, and a fair return on their railway property held and used in the service of transportation, and the importance to the public of the transportation services of such carriers."

I. C. C. Upheld in High Court

The United States Supreme Court, in an eight-to-one decision with Justice Roberts dissenting, has decided in the case of the Board of Trade of Kansas City, Mo. versus the United States that orders of the Interstate Commerce Commission are not invalid insofar as they abolish overhead through rates as a basis for transit at primary grain markets and prescribe new rate-break combinations applicable to transit both at primary markets and at interior points on routes passing through such markets.

The court had before it, said Justice Frankfurter, who wrote the majority opinion, orders embodying determinations made by the commission after inquiries into the grain rate structure stretching over a period of 12 years. The plaintiffs in the case are millers, elevator companies, boards of trade, grain exchanges, and other business interests in Kansas City, St. Louis, Omaha, St. Joseph, Atchison, Leavenworth, and Minneapolis, the great grain centers known in the trade as "primary markets."

The complainants contended that the commission's orders create an unlawful discrimination against these primary markets and the federal district court dismissed the complaint. The case came directly to the Supreme Court on appeal.

"It is not for us," wrote Justice Frankfurter, "to tinker with so sensitive an organism as the grain rate structure only a minor phase of which is caught in the record before us. If we were to grant the relief sought by the appellants, we would be restoring evils which the exclusive rate-break adjustment was designed to remove—evils which, for all we know, would be far more serious than those complained of by the appellants."

Justice Roberts felt that the relief prayed for should be granted, but he merely noted his dissent.

Retirement Board Operations in November

Benefits under the Railroad Retirement Act in November amounted to \$10,584,713, bringing total payments from the beginning of operations to \$482,546,126. During this period the Railroad Retirement Board certified 152,313 employee annuities, 48,543 pensions, 3,125 survivor annuities, 6,022 death benefit annuities, and 47,989 lump-sum death benefits.

Applications for employee annuities in November totaled 1,553, the lowest number received in any month since the enactment of the 1937 act. Employee annuities in force at the end of November totaled 122,703, with a monthly amount payable of \$8,075,495. The average monthly payment was \$65.81. Pensions in force totaled 29,761 at \$1,755,266 a month and an average payment of \$58.98.

Initial claims for railroad unemployment insurance averaged 2,659 a week in the four weeks ended November 28, 1941, an

increase of almost 1,500 over the average October week, due principally to seasonal unemployment among maintenance of way workers. The rise in applications was not as great, however, as in November 1939 and 1940 because of the generally higher level of employment in 1941.

Benefits certified in the November period amounted to \$609,449. For certifications with a maximum of 10 compensable days, the average benefit was \$22.44.

Railroads Clamp Down on Advance Reservations

Since before Christmas railroads in the East and Southeast generally have made their individual rules on advance reservations for Pullman space or seats on deluxe coach trains more restrictive or have been less pliable in the application of rules already in effect. This move is necessitated by a growing "tightness" in passenger equipment and is expected to remain in practice even after the rush of the holiday season.

The Seaboard Air Line, the New York, New Haven & Hartford and the Baltimore & Ohio will hold space reserved—but not paid for—only until 24 hr. before train departure time, with possible exception for off-line ticket purchasers. On all traffic to Florida the Pennsylvania will, in the New York metropolitan district, hold reservations only until 7 p.m. of the first succeeding business day after reservation is made, while outside of the New York area, limit is 7 p.m. of the third succeeding business day. On other than Florida business the road will continue to allow the patron a "reasonable" time to get to a ticket office to make payment.

75 Per Cent of 1942 Equipment Already on Order—Pelley

On January 6 at Chicago, J. J. Pelley, president of the Association of American Railroads, declared that 85,000 or 75 per cent of the 113,000 freight cars which the railways have committed themselves to buy in 1942, are now on order and added that 9,000 of these cars would be delivered in January, 10,500 in February and 12,500 during March.

Concerning the car construction program Mr. Pelley said, "With government co-operation we are now getting steel and other materials for car construction in better and faster order, with the result that we expect no difficulty in securing a minimum of 12,500 freight cars each month after March during the remainder of the year. We are given to understand that the car builders can have all materials necessary to build as many freight cars as are needed in excess of the 113,000 units planned to take care of estimated traffic requirements from 1942 on."

According to Mr. Pelley, actual cars on order or completed should total 90,000 by the end of January, which will leave about 23,000 units still to be ordered. Mr. Pelley also said that the 12,500 freight cars a month to be built after the month of March are well within the theoretical limits of the capacity of the country's 14 freight car manufacturers.

Concerning locomotive deliveries, he said

that these would be somewhat slower but that 1,000 units are on order and these should be delivered in ample time for requirements. Of the 1,000 units on order, he said that 630 are steam for main line service and the remainder are Diesel-electric, mostly for yard and switching service.

Ban on Auto and Truck Sales

A temporary ban on the retail sale, delivery, purchase or lease of new passenger automobiles and trucks, pending development of a rationing plan was imposed January 1 through limitation orders issued by Donald Nelson, director, Priorities Division, Office of Production Management.

At the same time it was announced that the Supply Priorities and Allocations Board had approved a program for the stopping of production of new passenger cars and light trucks within a few weeks. This program was submitted by the Division of Civilian Supply and the Automotive, Transportation, and Farm Equipment Branch of OPM. The rationing of new cars and trucks, OPM said is necessitated by impending restrictions on production. The rationing plan on cars and trucks, as in the case of new tires and tubes, will be developed and administered by the Office of Price Administration under direction of Leon Henderson, administrator. The ban on sales extends to January 15 at which time it is expected that a rationing plan will have been developed. It is expected that under the rationing plan purchase of new passenger cars and light trucks will be limited to government, lend-lease, and most essential civilian users."

Transport Board's Taxation Study Gets Under Way

Getting under way with its investigation of the extent to which taxes are imposed upon carriers, the Board of Investigation and Research created by the Transportation Act of 1940, announced on January 5 that its plans for the inquiry contemplate "a broad program of tax research, involving a tabulation of carrier tax payments, a study of relative tax burdens, and a survey of carrier tax laws and their administration." The tax study is one of the three specific assignments given the board under the act, the other two being investigations of the relative economy and fitness of rail, motor and water carriers, and of public aids to transport agencies.

Outlining the procedure adopted for the taxation study, the board's announcement said: "The board will prepare a tabulation of the number of tax dollars paid by carriers as a group, by each of the major types of carriers—rail, highway, water, air, and pipe line—and by important groups within each major type. Separate tabulations will be made of federal, state, and local taxes, and of property, income, payroll, and other major types of taxes. Highway user taxes will be allocated, as far as practicable, to passenger and property carriers and to private, contract, and common carriers. Data for these tabulations will be secured for the most part from the reports and records of tax collectors and taxpayers.

"Tax payments, after such adjustments as seem appropriate in the light of the

board's study of direct public aids to carriers, will then be compared with gross revenues, net revenues, invested capital, and other commonly accepted criteria to see whether there is substantial evidence of disparity in carrier tax burdens. This portion of the board's work will include a critical analysis of the problem of comparing tax burdens and will recognize the practical limitations of such comparisons.

"After the measurement of carrier tax burdens is well advanced, the board will examine the laws and administrative practices by which these burdens are determined. This will involve an analysis of the methods by which carrier taxes are assessed and collected by federal, state, and local agencies, with special emphasis on property tax administration, and will culminate in a review of the most promising means of correcting any disparities disclosed by the study of relative tax burdens. Tax laws, as enacted by the legislatures and interpreted by the courts, will be given careful study; tax administrators throughout the country will be interviewed; and the suggestions of the carrier interests will be solicited. The board will also study the effects of different tax policies upon the development, maintenance, and utilization of transportation facilities."

The tax research program is under the direction of Ronald B. Welch, formerly research director for the National Association of Assessing Officers.

Mediation Board Is Well Pleased

(Continued from page 172)

mediation its most important function and is gratified that during each succeeding year since it was created in 1934, mediation has become increasingly effective in settling disputes over proposed changes in rates of pay, rules or working conditions." As to arbitration, the board induced parties to four disputes to submit their controversies to arbitration during the year under review. One of these arbitration proceedings involved air line employees who are also subject to the Railway Labor Act.

Although the present report is only the seventh annual report of the National Mediation Board, attention is called to the fact that the period under review marked the close of a 15-year period in the settlement of railway labor disputes under the provisions of the Railway Labor Act. N. M. B.'s predecessor, the United States Board of Mediation, functioned for eight years under the act's provisions. Moreover, it is further pointed out that the Railway Labor Act's 15-year life is longer than that of any similar previous law since railroad labor legislation was first enacted in 1888; it has lasted one year longer than the Erdman Act of 1898 which remained in effect until 1912.

"The credit side of the ledger for this 15-year period," said the report, "shows many accomplishments. Not only have there been fewer strikes in the transportation industry since the act became effective than in any previous comparable period, but there has also been a steady

increase in the settlement of transportation labor disputes . . . by means of mediation under the auspices of the National Mediation Board." In fiscal 1941 there was "only one strike in the transportation industry involving some 75 employees out of a total of 1,500,000 in the service of the railroads and the air lines." The strike involved train and engine service employees of the Macon, Dublin & Savannah, and it lasted from February 27, 1941, until March 3, 1941.

Meanwhile, the year under review brought the disposition of 139 wage, rules or working-conditions disputes, and the settlement of 129 disputes involving representation of employees. The number of disputes docketed in fiscal 1941 was 33 per cent greater and the disputes disposed of numbered 32 per cent more than the average of the previous six years. "Increased industrial activity," it is pointed out, "is accompanied almost invariably by increased efforts of employees to improve their wages and working conditions." The vacations-with-pay demand of the 14 non-operating unions is listed as the most important case to come before the board in 1940-41; but, as noted above, that was later merged into the general wage case. "The work of the board," as the report put it, "is carried on with the very minimum of publicity. It is the rule of the board that its members and mediators refer the press to the railroads, air lines, or employee representatives for any public statements or comments in respect of the specific matters in mediation."

Considerable discussion of how the board approaches its job of appointing referees to handle cases deadlocked before the National Railroad Adjustment Board is included in the report which had previously noted that during 1940-41 charges were brought against an N. M. B. appointee for the first time. The charges that the appointee was not "a neutral person" were brought by carrier members of the Adjustment Board against Paul W. Richards, a former justice of the Supreme Court of Iowa; and they were dismissed by the Mediation Board after a hearing. By the qualifications which the act sets up for referees, the report said, the board "is restricted to a relatively narrow field from which appointments may be made." Persons who meet the qualifications, "being in highly responsible positions, are often reluctant to withdraw from their duties and accept temporary appointments."

During fiscal 1941, the Mediation Board was called upon to appoint referees in 41 separate instances. Names of the persons appointed are set up in a table, and attention is called to the fact that most of them had not previously served as referees. Later, in the tabulations of Adjustment Board expenditures, it is shown that the referee work was spread somewhat more than in the previous fiscal year when one of the appointees—Frank M. Swacker, attorney of New York—was paid a total of \$22,693.75 for working 323¼ days. In fiscal 1941 Mr. Swacker got only 23¼ days work for which he was paid a total of \$1,162.50. Top 1940-41 pay went to Richard F. Mitchell of Fort Dodge, Iowa, who was paid a total of \$7,987.50. Next

in turn came John C. Young of Denver, Colo., who received \$6,050; and the aforementioned Paul W. Richards who received \$6,026. Mr. Richards worked 120½ days at \$50 a day and 19 days at \$1 per year.

During the year under review, the Mediation Board spent a total of \$150,513, while the Adjustment Board spent \$228,940.

440 Millions Net In Eleven Months

(Continued from page 174)

operating income of \$447,508,601, a return of 3.92 per cent, compared with \$335,224,406 or 2.97 per cent in the same period in 1940 and \$416,555,979 or 3.78 per cent compared with 1930.

Operating revenues in the Eastern district in the 11 months totaled \$2,411,562,164, an increase of 22.9 per cent compared with the same period in 1940, but a decrease of 0.9 per cent compared with the same 11 months in 1930. Operating expenses totaled \$1,630,649,011, an increase of 18.6 per cent above 1940, but a decrease of 9.6 per cent under 1930. In the Eastern district for November the estimated net income was \$17,004,584 compared with \$20,345,653 in November, 1940. Net railway operating income amounted to \$34,220,438 compared with \$36,410,256 in November, 1940, and \$28,102,384 in the same month of 1930.

The 11-months estimated net income in the Southern district was \$66,600,316 compared with \$8,856,203 in the same period last year. Those same roads in the 11 months had a net railway operating income of \$126,157,216, or 4.38 per cent, compared with \$69,762,612 or 2.42 per cent in the same period of 1940, and \$79,637,041 or 2.63 per cent compared with 1930.

Gross in the Southern district in the 11 months totaled \$632,124,358, an increase of 28 per cent compared with the same period in 1940, and an increase of 6.6 per cent compared with the same 11 months in 1930. Operating expenses totaled \$426,874,449, an increase of 15.2 per cent above 1940, but a decrease of 8.3 per cent under 1930. For November alone the roads in the Southern district had an estimated net income of \$5,929,925 compared with \$4,501,433 in November 1940. Net railway operating income amounted to \$10,406,556 compared with \$9,402,080 in November, 1940, and \$6,472,898 in the same month of 1930.

Class I roads in the Western district in the 11 months had an estimated net income of \$128,686,166 compared with a deficit of \$8,367,097 in the same period last year. Those same roads in the 11 months had a net railway operating income of \$343,122,708, or 3.37 per cent, compared with \$198,705,455 or 1.96 per cent in the same period in 1940, and \$324,021,032 or 31.6 per cent in 1930.

Gross in the Western district in the 11 months totaled \$1,823,453,322, an increase of 24.9 per cent compared with the same period in 1940, but a decrease of three per cent compared with the same 11 months in 1930. Operating expenses totaled \$1,254,119,687, an increase of 16.3 per cent above 1940, but a decrease of 8.2 per cent under 1930.

Class I roads in the Western district for November had an estimated net income of \$7,129,806 compared with \$5,962,251 in November, 1940. Net railway operating income amounted to \$24,137,850 compared with \$25,747,890 in November 1940, and \$26,600,134 in the same month of 1930.

Budd Calls for Co-operation on Export Shipments

Before retiring on December 31 from the position of transportation commissioner of the Advisory Commission to the Council of National Defense, Ralph Budd, president of the Chicago, Burlington & Quincy, issued a statement appealing to all shippers and forwarding agent for cooperation in the interest of avoiding congestion at the ports. Unless such cooperation is forthcoming, Mr. Budd warned, "it may become necessary to place all commercial export shipments on an embargo and permit basis."

"The entrance of the United States into the war," the statement said, "will require a heavy usage of the port facilities by our own government. At the same time, it is absolutely necessary that there be no interruption to the flow of lend-lease materials to other governments. So that commercial export shipments may not interfere with the handling of either of these movements, it is requested that such shipments not be moved into any port until a definite allocation of steamship space has been obtained, and that the movement be timed to reach the port not more than 10 days in advance of the date of such space allocation. In the case of freight intended for export now in railroad possession at any of the ports which cannot be exported within 30 days, it is requested that other disposition be furnished so that the railroad storage facilities may be relieved."

Presidents Stress Importance of Work in Annual Messages

Railroad presidents, in their annual messages to officers and employees this year, emphasized the vital role of the railroads in the country's war efforts and exhorted personnel to fill their responsibilities well. Here are a few samples.

F. E. Williamson, New York Central.—"The share of the American railroads in our common task is a large one. We must move in an ever increasing stream the men of our armed forces and the equipment and food supplies for them and for our allies. We must move the raw materials and the finished products of the industry and agriculture upon which those armed forces and allies depend. We must move food stuffs and other essentials to keep our civilian population going. And we must do all this without delay.

"Fortunately, the railroads are better prepared than ever before to assume their full share of the national effort. We have men trained and skilled in their work. We have plant facilities unequalled anywhere else in the world. Our operating practices have been developed to a high degree and shippers are wholeheartedly cooperating to enable us to operate soundly.

"The spark to set our transportation machine into the most effective action is the patriotic, enthusiastic spirit of that great army of men who run the railroads. I am sure that spark will not be lacking;

I know New York Central men and I believe that they and all other railroad men will do their job and do it well, in the knowledge that they are speeding the defeat of the enemy and preserving the security of the American way of life."

M. W. Clement, Pennsylvania.—"You did a fine job in 1941. With the war on, you will do a better job next year. My wish to you for the New Year is that you may have the happiness and satisfaction that come from things well done—from having served our country well."

R. B. White, Baltimore & Ohio.—"Now, our country, struck treacherously and hard by Japan, is actively at war against the Axis. Our responsibilities as railroad men, great as they have been, are incalculably greater. American blood is being shed to preserve our nation and our civilization.

"Our first duty is to carry on unflinchingly our job as a transportation agency. We must deliver the goods. Second, we must guard against damage to property. Our loyal personnel can help prevent this, whether caused by accident or design. Fires are our greatest hazard but there are other dangers concerning which you will be advised from time to time. I also urge you to do your full part for civilian defense in your respective communities, in such ways as may prove most helpful.

"In 1941 came the first attack by a foreign foe on United States territory in more than one hundred years. The better we do our job as B. & O.-Alton men and women, the quicker our armaments will grow to a strength this foe cannot withstand, and the fewer the casualties to the men in the armed services."

William White, Delaware, Lackawanna & Western.—"We enter the new year a nation at war. The nation at war means you and I at war. Railroad men are an essential part of the home front. We will be called upon to do unusual things, and we must construe such orders and requests in the line of duty.

"We must keep commerce moving without interruption. Should there be interruption from any cause, it is the duty of every one of us to put our shoulder to the wheel and remove the obstacles—no matter what the cause may be nor what the sacrifice might be. I am sure that no Lackawanna employee will be found wanting; and it is in this spirit that I wish you a Happy New Year, with the hope that we may all be satisfied at the end of next year that our job has been well done."

A. T. Mercier, Southern Pacific.—"Our first duty is to our Government in the war. Because our country is engaged in a two-ocean conflict, railroad service now is doubly vital in providing the main channels of land transportation linking the two oceans. War factories depend on us to carry their raw materials, parts for assembly and finished products. In this way the whole industrial war effort rests basically on the railroads, and thus far the rail lines have done a job unexcelled by any industry."

Regarding the national war effort, Mr. Mercier makes several definite suggestions as to how S. P. employees can help. He cautions particularly against giving any information that may help the enemy. "Don't gossip with your fellows or outsiders about

matters that may affect transportation of war supplies or troop movements," he writes. Further, he urges employees to report any suspicious circumstances to their superior officer. "Get the most out of our equipment, and urge shippers to cooperate. "Save metal and other materials. Be patient, courteous and cooperative among yourselves and with customers, and be especially considerate of men in the military service."

Gillette Criticizes Consent Decree in Oil Cases

Senator Gillette, Democrat of Iowa, has characterized the recent consent decree entered in the United States District Court for the District of Columbia against some 20 oil companies and 52 common carriers by pipe line, and seven companies which are subsidiaries or affiliates of the oil companies as an example of "gun-barrel vision." Details of the decree, which prohibits the companies from violating the rebate provisions of the Interstate Commerce Act and the Elkins Act, were set out in the *Railway Age* of December 27, 1941, page 1091.

As the disease known as "gun-barrel vision" progresses, declared the Iowa solon, the field of vision of the victim becomes more and more restricted, and it is as if he were looking down a gun barrel and seeing nothing but that tiny field. "The longer I live in Washington," he continued, "the more I am convinced that we have in our bureaus here persons who are afflicted with official gun-barrel vision, and who are able to see nothing but the little problem at the end of the bore down which they are looking."

After pointing out that as a result of the consent decree the owner-operators of the pipe-lines could use any additional profits above seven per cent for such expansion as they saw fit, he told his colleagues that the government had waived penalties of one and a half billion dollars for which it "had a dead open-and-shut case." He then said that an army of 6,000,000 men could be paid for a year with the amount "that the government threw away."

Commission Doooms Missouri Pacific Branch

The Interstate Commerce Commission has denied a petition of the Kansas Corporation Commission, the Board of County Commissioners of Coffey County, Kans., and the Board of County Commissioners of Greenwood County, Kans., asking that it reopen Finance Docket No. 12205, the case wherein the Missouri Pacific was recently authorized to abandon its LeRoy-Madison branch in Kansas. Efforts had been made by the local interests and the Kansas Corporation Commission to operate the road with reduced service and reduced train crews using gasoline cars, but to no avail because of the failure of the railroad labor unions to approve the plan. Recently in the decision finally affirming the abandonment, Chairman Eastman declared that "it is a matter of great regret to me that . . . applicant's employees are unwilling to cooperate in a reduction of the expense of operating this branch line."

As a last resort the Kansas Corporation Commission has addressed a final appeal

to the chiefs of the operating unions involved asking them to relax their union rules in order that the branch line may be operated on a much restricted basis with a smaller crew.

"It seems so apparent," the corporation commission wrote to the brotherhood chiefs, "that Chairman Eastman is correct in his statements that the attitude taken is harmful, certainly to the public and very possibly to the employees themselves, that we feel that the question has not received your personal attention. It seems further that unless the position taken is changed or modified in some manner that not only five jobs will be lost rather than two, but also the public will be deprived of a necessary transportation service."

"We assume," the letter concluded, "that the position taken is due to a fear that if concession is made, similar concessions might be required in other instances. This may well be true. We urge, however, that the question here presented is very much wider in its scope. In the past decade, Kansas has lost approximately 1,000 miles, or 10 per cent of its total rail mileage. We are forced to the conclusion that unless reductions in the expense of branch line service can be made, further very considerable abandonments of branch lines cannot be avoided."

The petition of the Kansas interests also asserts that the practice of operating a branch line as though it were a main line must be stopped. It is further felt that some means of making the service fit the needs of the traffic must be found.

"To permit abandonment," it concludes, "while a branch is being operated on main line standards is simply refusing to attempt a solution to the problem. Many branch lines, this included, could be operated with one-half the amount now being expended. Gas propelled units of three, or possible two men crews, operating three times a week could handle the traffic. This would be a practical operation and would save our branch lines."

Retirement Board Rulings

Persons who perform casual janitor services under the supervision of a covered employer are employees within the meaning of the Railroad Retirement Act, according to an opinion of the general counsel of the Railroad Retirement Board, even though they are not regarded as employees by the management and have not shared in the rights and privileges accorded to employees.

The board has also ruled that directors of corporate employers are not employees within the meaning of the Railroad Retirement and Unemployment Insurance Acts, either as individuals subject to the continuing authority of the employer to supervise their services or as officers of such employers.

Services rendered as an employee is creditable toward an annuity, even though no remuneration is received, in the opinion of the board's general counsel. Under the Retirement Act money remuneration need only be earned to be compensation, it was held, and service is creditable under the act if it is rendered for compensation.

The board's general counsel has also

taken the position that a lawyer who represents a railway association without supervision or direction as to the manner of rendering his services is not an employee under the acts. Also, the board's legal department has decided that compensation received for doing extra work for a railway association, although described as "gifts," is creditable under the acts.

Aitchison Will Be Acting Chairman of I. C. C.

Clyde B. Aitchison, senior member of the Interstate Commerce Commission, will function as acting chairman while Chairman Joseph B. Eastman serves as director of the Office of Defense Transportation. The commission's announcement of January 2 said that although Mr. Eastman's new assignment will make it impossible for him to continue many of his duties as commissioner and chairman, he will nevertheless continue for the present "as a member of the commission and no change will be made in his designation as chairman."

Mr. Eastman has been chairman since July 1, 1939, having been chosen at that time for a three-year term when the commission, among other organization changes, abandoned the plan of rotating the chairmanship annually on a seniority basis. Thus Mr. Eastman's chairmanship term will expire next June 30. Mr. Aitchison has been a member of the commission since September, 1917; and he was chairman from March, 1919, until March, 1920, and during 1925.

Other reassignments of duties announced by the commission include the substitution of Commissioner Charles D. Mahaffie for Chairman Eastman as a member and chairman of Division 1, the administrative division; and the designation of Commissioner William J. Patterson as a member of Division 3, rates and service, to replace Mr. Mahaffie. Commissioner Carroll Miller becomes chairman of Division 3. Also, the commission's legislative committee has been reconstituted to consist of Commissioner Walter M. W. Splawn, chairman, and Commissioners Mahaffie and John L. Rogers.

Highway and Grade Crossing Funds Apportioned

Acting for Federal Works Administrator Philip B. Fleming, Assistant Administrator Baird Snyder, III, has apportioned to the states \$100,000,000 for improvement of the federal-aid highway system, \$17,500,000 for secondary roads, and \$20,000,000 for elimination of hazards at railroad grade crossings.

These funds are for the fiscal year beginning July 1, 1942. They were authorized by the Federal Highway Act of 1940 and are reduced by deductions authorized for administrative expenses. The law requires that the apportionment be made on or before January 1, 1942.

In making the apportionment Mr. Snyder said that "it will be the policy of the Federal Works Agency to restrict the approval of projects to those essential to national defense as certified by the appropriate Federal defense agencies."

Improvement of sections of highway that

have been found to be inadequate for defense traffic, strengthening or replacement of weak bridges on main highways, and improvements desired by defense officials in connection with planned operations will make up the program.

All work will be done in cooperation with the state highway departments according to the usual Federal-aid procedure except that projects will be limited to those having a definite defense significance, it was stated.

The apportionment of grade crossing funds follow:

State	Grade Crossings
Alabama	\$405,128
Arizona	129,583
Arkansas	336,460
California	798,434
Colorado	255,449
Connecticut	164,002
Delaware	97,500
Florida	299,694
Georgia	495,487
Idaho	165,774
Illinois	1,012,936
Indiana	503,499
Iowa	538,416
Kansas	485,674
Kentucky	358,327
Louisiana	317,974
Maine	133,885
Maryland	197,436
Massachusetts	388,101
Michigan	651,739
Minnesota	526,346
Mississippi	314,073
Missouri	578,946
Montana	262,388
Nebraska	333,931
Nevada	97,500
New Hampshire	97,500
New Jersey	376,647
New Mexico	177,246
New York	1,330,156
North Carolina	514,993
North Dakota	299,447
Ohio	818,984
Oklahoma	442,035
Oregon	228,533
Pennsylvania	1,089,534
Rhode Island	97,500
South Carolina	298,209
South Dakota	253,551
Tennessee	382,507
Texas	1,098,295
Utah	129,761
Vermont	97,500
Virginia	374,250
Washington	303,889
West Virginia	264,466
Wisconsin	483,930
Wyoming	131,879
District of Columbia	97,500
Hawaii	97,500
Puerto Rico	165,506
Total	\$19,500,000

Pullman Seeks Rate Increase

Asserting that additional revenue is needed to meet recent increases in wages, the Pullman Company has filed with the Interstate Commerce Commission a petition for authority to increase by 10 per cent all of its sleeping and parlor car rates. This action is in line with that taken by the railroads and the Railway Express Agency, in asking for rate increases to match the recent stepping up of wage schedules.

Under higher pay rates recently established, Pullman's total estimated annual increase in wages and payroll taxes, on the basis of 1941 employment, will amount to \$6,352,200, the company's petition says, \$6,000,000 being attributed to increased wages and \$352,200 to higher taxes. The 10 per cent increase in rates, the petition adds, would produce on the basis of 1941 operation an estimated increase in gross earnings of \$6,127,830, part of which would accrue to the railroads under existing agreements.

The company also points to recent ad-

vances in the cost of its materials and supplies, declaring that while it is difficult to estimate the amounts involved such increases in costs will undoubtedly be substantial. In conclusion, the petition states that the need for the requested 10 per cent increase in sleeping and parlor car rates is extremely urgent to provide necessary revenue for adequate and efficient service to the public.

Pullman's 1941 payroll is estimated by the company at \$33,980,000 and the wage increases, based on last year's employment, will lift the payroll to an estimated \$39,980,000. The company relates that because of the similarity of duties between railroad and Pullman employees, most of the Pullman wage schedules were raised after the mediation settlement of December 1, 1941, and that others are being negotiated.

Eastman Opposes Moving the I. C. C.

(Continued from page 173)

ington agencies. This, he said, would greatly impair his agency's efficiency.

The brief submitted by Mr. Eastman notes in the beginning that the commission had (as of last June) 2,017 employees in Washington and 818 in the field. The brief goes on to declare that if it is necessary to choose between agencies in determining what transfers from Washington shall be made, the following special matters should weigh heavily so far as the commission is concerned:

1. The fact that the organic law requires that the commission shall maintain its principal office and hold its general sessions at Washington, and that it has been there for 54 years. The fact was also mentioned that the commission's employees are more deeply rooted in the Washington soil than are those of some of the younger agencies.

2. The fact that the transfer would "completely disrupt" the work of the Bureau of Motor Carriers, much of which is not on a current basis.

3. The fact that the commission is engaged in activities closely related to national defense, and must maintain close contact with other national transportation organizations which have their headquarters in Washington.

Turning to the advantages and disadvantages of moving from Washington, the brief asserts that the commission can see only one possible advantage in a transfer. That is that if the commission were moved to a more central location in the country, it would be more accessible to people who had to come to it from some sections of the country. On the other hand, it is pointed out that the majority of the people are in the eastern part of the country where the commission is located, and moving it to the middle west would cause them some inconvenience. Also, it is noted that many people kill two birds with one stone by doing business with other departments in Washington at the same time that they come to see the commission.

The brief lists the following basic objections to moving from Washington:

1. In much of its work the commission acts as an agent or representative of

Congress in the administration or application to specific cases of a general rule laid down by Congress, and its relations with Congress have always, therefore, been very close. If the commission were moved several hundred miles away from Washington, it is felt that the present close relations with Congress could not be maintained, and that to respond to the minimum demands of Congress, it would be necessary for members of the commission to spend much time in travel.

2. The commission has much need to confer with other departments of the government. If it were moved, there would be a disruption in the relations with these other departments of the government which would be a source of embarrassment, loss of time, and expense to all concerned.

3. The carriers which the commission regulates have central organizations which have their headquarters in Washington. The commission feels that it is unlikely that under present conditions these groups would see fit to follow the commission in removal of their headquarters from Washington. This situation also applies to several important organizations of shippers and an organization representing the state regulatory commissions which is provided with space by requirement of the Interstate Commerce Act in the offices of the commission.

4. In recent years considerable conflict between regions of the country with respect to railroad freight rates has developed, and it has become a "very important factor" in the regulatory work of the commission. The agitation in regard to this matter centers in the south and the southwest. Washington, the brief declares, is the only neutral place from the point of view of such regional controversies. Location of the commission at Chicago, for example, would undoubtedly be a source of much dissatisfaction to the south and the southwest. Similar objections would be raised to other locations.

As to the question of whether or not there are bureaus or sections of bureaus now located in Washington which could be transferred to some other place without detriment to the commission's work, the brief declares that the answer must be in the negative.

The views of the Washington chapter of the Association of Practitioners before the Interstate Commerce Commission in opposition to any moving of the commission were placed in the record by R. Granville Curry, former chairman of the local chapter.

Representative Manasco, Democrat of Alabama, wanted to know whether or not it might be feasible for some of the private organizations which have buildings in Washington to move out and give their space to the government. He said that it had been suggested to him that the Southern might be able to move to some other city on its lines, thus giving a large amount of office space to the government for the emergency.

The subcommittee will make a report and recommendations in the near future on the question of which agencies, if any, it feels should be decentralized.

Going forward with its plans to trans-

fer to Chicago the Railroad Retirement Board is receiving returns from a questionnaire indicating that not more than 50 per cent of its staff will make the move. Generally it is understood that the board will not refuse to grant to any employees desiring to remain in Washington releases which are necessary to qualify them for immediate employment by other agencies. It is, however, undertaking to make arrangements whereby transfers to other agencies will be deferred until the board actually moves.

The board's surveys of the Chicago situation thus far indicate that there is in that city no suitable building available for leasing. What are regarded as suitable buildings are, however, available for sale, and the board is contemplating seeking authority from Congress for the purchase of a building.

President Asks \$9,557,809 for I. C. C.

The Interstate Commerce Commission would receive \$9,557,809 to carry on its activities during the fiscal year 1943 if the Congress adopts the recommendation of the President which was sent to Capitol Hill on January 7 in the form of the budget for the coming fiscal year. This figure is an increase of \$235,059 over the appropriations for the fiscal year 1942.

The increases provided are: \$5,900 to provide additional inspectors for signal safety systems; \$2,500 for the Bureau of Valuation for the rental of field office space occasioned by giving up office space to other offices of the federal government; \$128,165 for the commission's emergency work in preventing car shortages in connection with national defense exigencies, the latter fund to become immediately available; and \$130,294 for administrative within-grade promotions which is properly allocated to the various bureaus of the commission. These increases, the budget explains, are offset by decreases of \$800 in printing and binding and \$31,000 under the Bureau of Motor Carriers, the latter being occasioned by nonrecurring items of expenditure.

In the budget message which accompanied the formal budget the Chief Executive told the Congress that all activities of the government must be placed in the category of defense and were being centered on the war effort. "The public works program," he wrote, "is being fully adjusted to the war effort. The general program of \$578,000,000 includes those projects necessary for increasing production of hydroelectric power, for flood control, and for river and harbor work related to military needs. Federal aid for highways will be expended only for construction essential for strategic purposes. Other highway projects will be deferred until the post-war period. For all other federal construction I am restricting expenditures to those active projects which cannot be discontinued without endangering the structural work now in progress."

The breakdown of the I.C.C. estimated appropriations is set forth as follows: General administrative expenses, \$2,908,012; regulating accounts, \$850,052; safety of employees, \$510,955; signal safety systems, \$133,780; locomotive inspection, \$475,000;

valuation of property of carriers, \$652,405; motor transport regulation, \$3,586,240; printing and binding, \$203,200; salaries and expenses (national defense), \$238,165.

The 1943 estimates for the National Mediation Board, which includes the National Railroad Adjustment Board, total \$420,415, representing a net decrease of \$31,273 under the appropriation for 1942. This comprises increases of \$1,197 for the National Mediation Board, and \$25,530 for salaries and expenses of the National Railroad Adjustment Board, offset by decreases of \$55,000 in the appropriation for arbitration and emergency boards and \$3,000 in printing and binding of the Adjustment Board.

The budget also reveals that the estimate of \$3,041,000 for the general expenses of the Railroad Retirement Board for administration of the Railroad Retirement Act is \$109,000 less than the amount appropriated in 1942. The budget statement goes on to say that a nonrecurring item of \$80,981 in connection with the prior service records project accounts for the major portion of this decrease. The remainder is made up of decreases of \$262 for salaries; \$10,757 for miscellaneous expenses comprised of a decrease for rents amounting to \$16,517 offset by an increase of \$5,760 for transfer to the Treasury; and \$17,000 for printing and binding.

For the railroad retirement account the estimate of \$214,801,000 is an increase of \$73,951,000 over 1942. For the railroad unemployment insurance administration fund, according to the Bureau of the Budget, the estimate of \$9,500,000 represents an estimate of 10 per cent of contributions under the Railroad Unemployment Insurance Act, and an estimate of balances of amounts collected on account of railroad employees under title IX of the Social Security Act and transferred to this appropriation.

Included in the Federal Works Agency, Public Roads Administration's federal-aid highway estimate is an item of \$22,000,000 for the elimination of grade crossings. This \$22,000,000 1943 estimated figure compares with a 1942 appropriation of \$10,000,000.

No estimate is provided for the Board of Investigation and Research created under the Transportation Act of 1940. An appropriation of \$100,000 was made in the First Supplemental National Defense Appropriation Act, 1942, to inaugurate the work of the board during the fiscal year 1942. Subsequently, an additional \$246,500 was appropriated in the Third Supplemental National Defense Appropriation Act, 1942, for the completion of certain directive studies, to remain available during the fiscal year 1943 through September 18, 1942, when the board's tenure will have expired unless extended by Presidential proclamation.

More Revenue Per Unit of Equipment

Increased utilization of freight cars and locomotives has contributed to a "marked increase in the freight revenue earned per unit of equipment," according to data included in the latest issue of the Bureau of Statistics' Monthly Comment on Trans-

portation Statistics which was made public on January 6. The data show that in 1941 the freight revenue per serviceable freight car on line was \$667 as compared with \$543 in 1940 and \$517 in 1939; revenue per serviceable road freight locomotive was \$72,571 last year, \$61,636 in 1940, and \$59,072 in 1939.

The Bureau notes that the foregoing comparisons are "sound" because no general change in the rate level took place during the three-year period involved. It points out, however, that changes in the traffic volume and in the composition of traffic had some influence.

Another table compares the monthly increases in 1941 carloadings over 1940 with similar increases in the volume of trucked freight as reported by American Trucking Associations. The Bureau thought that the comparison "may have significance as showing for November a halt in the much more rapid growth in truck than in rail tonnage which appeared for all months between January and November." The data show that carloadings of all freight in November were 14.6 per cent above November, 1940, while "miscellaneous" carloadings were up 20.3 per cent. November truck volume for all commodities was 7.6 per cent above November, 1940, while the volume of general freight was up 10.9 per cent. In October the rail carloadings were 11.6 per cent above the comparable 1940 month while the truck volume was up 19.9 per cent. A like situation prevailed in other 1941 months before November, the trucks making a relatively better showing on both all commodities and general freight.

With respect to passenger traffic the Bureau notes that "air traffic in most of the first nine months of 1941 has grown faster than rail passenger traffic," although both agencies as well as motor bus companies turned in "some remarkably high percentages of increases."

Railroad Men Get Key Posts on Solid Fuel Co-ordination

Two railroad men, Thomas J. Thomas and Ralph Park Russell, were recently appointed by Harold L. Ickes, Secretary of the Interior, to head bituminous coal and transportation, respectively, for Solid Fuel Coordination. Mr. Thomas and Mr. Russell, along with two others selected to head coke and anthracite, will serve with Howard A. Gray, the new acting director of Solid Fuels Coordination. The four new officers selected are: Thomas J. Thomas, Chicago, president of the Valier Coal Company and assistant to the president of the Chicago, Burlington & Quincy, who was named associate director of Solid Fuels Coordination in charge of bituminous coal; Ralph Park Russell, Northumberland, Pa., formerly superintendent of car service for the Pennsylvania, who was named associate director of Solid Fuels Coordination in charge of transportation; Harlen M. Chapman, formerly vice-president of the Hudson Valley Fuel Corporation, Troy, N. Y., who was named assistant director of Solid Fuels Coordination in charge of coke; and Brig. Gen. Brice P. Disque, New York City, director of the Peoples National Bank & Trust Co., New York, and formerly pres-

ident of the Anthracite Institute, New York, who was named as associate director of Solid Fuels Coordination in charge of anthracite.

Thomas J. Thomas, the associate director for bituminous coal, began his career in his youth as a miner, and has become an expert in the operations of mines and the production of bituminous coal. Since 1925, he has been assistant to the president of the Chicago, Burlington & Quincy, and since 1927, he has been president and chairman of the executive committee of the Valier Coal Company, which supplies fuel for the Burlington. Mr. Thomas has served as a production and operations consultant for numerous large coal companies throughout the United States and Canada.

Mr. Russell, the new associate director in charge of transportation, is a veteran railroad man with an extensive background in the transportation of bituminous coal, coke and anthracite and prior to September, 1941, he was superintendent of car service for the Pennsylvania and had served that company since 1902. Since September, 1941, he has been chief of the rail transportation section, Transportation division, in the Office of the Petroleum Coordinator for national defense.

"Grandfather" Rights of Water Carriers

Water lines which have been serving points to which their barges are towed by another company under arrangements which give them no authority to direct or control the performance of the towing operations should not be awarded "grandfather-clause" certificates covering operations to the points thus served, according to the recommendations of a proposed report by Interstate Commerce Commission Examiner Stiles. The examiner would have the commission find that in such a set-up the transportation involved is that of the towing company, performed by it as a connecting common carrier.

The proceeding, which, as the examiner put it, presents "several novel questions," is W-104, involving applications of the Union Barge Line Corporation of Pittsburgh, Pa., for "grandfather-clause" certificates under Part III of the Interstate Commerce Act covering common-carrier operations generally on the Mississippi river south of Cairo, Ill., and its tributaries; the Ohio and its tributaries; the Monongahela and its tributaries; the Allegheny and its tributaries; and the Gulf intracoastal waterway. Also there were applications covering contract-carrier operations in towage of floating objects; but the examiner found it unnecessary to consider those because such operations were exempt from regulation under a recent commission order.

As his recommended finding is summarized in the report's headnotes, the examiner would have the commission rule that Union is "entitled to continue operation as a common carrier by water of commodities generally, with certain exceptions, between all ports on the Allegheny, Monongahela, Ohio, Kanawha, and Wolf rivers, and the Mississippi river south of Cairo, Ill., by reason of having been en-

gaged in such operation on January 1, 1940, and continuously since."

In disposing of the towing issue, noted at the outset, Examiner Stiles discussed at length the set up whereby Union has been serving points on the Gulf intracoastal waterway under arrangements whereby the towage is performed by the Coyle Lines, an affiliate of the DeBardeleben Coal Corporation. In contending for a certificate covering such operations Union relied, among other arguments, on that provision of the act which stipulates that towage, lighterage and floatage within terminal areas shall be considered to be transportation by the line-haul carrier for which such operations are performed. Also, the applicant cited an administrative ruling of the commission's Bureau of Water Carriers.

In rejecting the contention the examiner said in part: "If section 303(f)(2) were construed to mean that the provisions of Part III do not apply to any tower performing transportation of freight in the barges of another carrier subject to the act regardless of the contract between the parties, it necessarily follows that no water carrier subject to Part III, having entered into contracts for transportation to, and issued bills of lading for, transportation to points not reached by it, could permit its loaded barges to go to points beyond the limits of the routes over which it holds a certificate to operate; for to do so would constitute its engaging in unauthorized transportation. Where joint rates and routes have been published, such a construction would prevent the free interchange of barges and necessitate the transfer of lading at every interchange point. Such a burden upon interstate commerce would be contrary to the purpose and history of federal regulation of interstate commerce. Part III was intended to promote, and not unduly restrict, commerce on the waterways of the United States. Upon the facts the commission should find that the transportation by Coyle Lines of freight in Union's barges on the canal was not and is not performed by it as tower under an agency or contractual arrangement, but was and is performed by it as a connecting common carrier...."

Previously Examiner Stiles had considered the arrangements between Union and Coyle, and there found that the towage was performed "by Coyle Lines as a common carrier and not under the domination and control of Union." In that connection the examiner had cited commission decisions on similar issues raised in motor carrier proceedings, notably the Dixie Ohio Express Co. case wherein the commission found that a company employing vehicles of owner-operators cannot qualify for a certificate unless such vehicles are "under its direction and control, and under its responsibility to the general public as well as to the shipper." While he did not contend that the motor carrier decisions were controlling, he nevertheless found the tests there applied "enlightening in the consideration of the issues herein."

Mr. Stiles also cited the Dixie Ohio case and other decisions in rejecting the contention of protesting rail carriers who asked "that the certificate to be granted be restricted to certain commodities, and to

those points to and from which actual transportation of those certain commodities was regularly performed." Thus the certificate which the examiner would have the commission grant Union would be a liberal one, covering transportation of "general commodities, except livestock, high explosives, and commodities requiring heat or refrigeration."

Year-Long Session of Congress Ended January 2

The first session of the Seventy-seventh Congress which began on January 3, 1941, adjourned sine die last Friday, thus making way for the opening of the second session on Monday. Since it was the same Congress that reconvened this week all matters pending in the previous session retain their status.

The year-long session did not bring any important new transportation legislation, although a few of its enactments were of interest to the railroads. These included the Cole pipe-line bill which gave the government and private companies powers of eminent domain to acquire lands for the construction of pipe lines; the law granting the Reconstruction Finance Corporation broad defense-program-financing powers, including authority to build and equip railroads; and the law extending the provisions of the Bituminous Coal Act for two years beyond last April 26. Also enacted was the so-called national defense highway bill after an earlier version had been voted by President Roosevelt, and the tax bill with its five per cent tax on fares paid for passenger transportation. Other measures give the President sweeping wartime powers, including authority to consolidate and transfer the functions of government agencies such as the Interstate Commerce Commission, National Mediation Board, Railroad Retirement Board, and Board of Investigation and Research created by the Transportation Act of 1940.

The Board of Investigation and Research was finally created in August after the President had substituted Robert E. Webb of Kentucky and C. E. Childe of Nebraska for two of the original appointees—Wayne Coy and Charles West, upon whom the Senate committee on interstate commerce had failed to act. Messrs. Webb and Childe were promptly confirmed along with the third of the original appointees, Nelson Lee Smith of New Hampshire, who is now chairman of the Board. Meanwhile the Senate also handed government agencies a couple of assignments of interest to the railroads, calling upon the Railroad Retirement Board to make a study of the incidence of injuries and diseases among railroad employees; and upon the Wage and Hour Division, Department of Labor, to investigate practices adopted by railroads and terminal companies as a result of the application of the minimum-wage provisions of the Fair Labor Standards Act to red caps. There were a few more reports from Senator Wheeler's committee which investigated railroad finances while a lively time was had by all at the Senate hearings on Petroleum Coordinator Ickes allegations that there was a gasoline shortage in Atlantic seaboard states. Those hearings were conducted by a special com-

mittee headed by Senator Maloney, Democrat of Connecticut.

Among the pending measures which were carried over into the new session is S. 210, the bill for the regulation of freight forwarders which is now in conference, different versions having been passed by the Senate and House. Also, the Lea bill calling for complete repeal of land-grant rates; and the Wheeler-Lea bill to give the I. C. C. power upon complaint to set aside state regulations governing sizes and weights of motor vehicles. Carrying out mandates of the Motor Carrier Act and the Transportation Act of 1940 the commission recommended such action in a report on the need for federal regulation in that field.

The pending rivers and harbors bill, with its authorizations for projects estimated to cost nearly a billion dollars, has not yet been acted upon by the House. In it are authorizations for such highly controversial projects as the St. Lawrence seaway and power project; the Tennessee-Tombigbee waterway; the canalization of the Beaver and Mahoning rivers in Ohio and Pennsylvania; and the Florida Ship Canal.

Other pending measures include bills to give the President authority to establish daylight saving time; bills to require pipe lines to obtain certificates of convenience and necessity from the I. C. C. for the construction of new lines and extensions and others to divorce the business of producing, refining and transporting petroleum products from that of marketing such products. Also, bills proposing liberalizing amendments to the Railroad Retirement Act; federal workmen's compensation for employees of motor carriers; prohibiting agreements or understandings between common carriers with respect to passenger services; super-highway bills; bills to make claims for personal injuries preferred claims in railroad reorganization proceedings; various bills to provide reduced fares or free travel for members of the armed forces on furlough; and others to provide for payment from the Treasury to equalize as between regions the freight charges on defense materials.

In addition to the aforementioned land-grant repealer introduced by Representative Lea, Democrat of California, there are other pending bills which would define specifically the military and naval traffic which was left eligible for land-grant deductions when the law was partially repealed by the Transportation Act of 1940. Then there is the bill introduced "by request" by Senator Smith, Democrat of South Carolina, to amend the National Railroad Adjustment Board provisions of the Railway Labor Act; it embodies provisions which were agreed upon by the American Short Line Railroad Association and the Association of American Railroads.

Per Diem Payments by Seatrail

The Interstate Commerce Commission has postponed until April 1 the effective date of its outstanding order requiring railroads participating in through routes with Seatrail Lines, Inc., to interchange their cars with that seagoing car carrier at the regular \$1 per diem to be paid by Seatrail "only for such period as the cars

are in its actual possession." The order was issued in the Nos. 25728 and 25878 proceedings, the report on which was reviewed in the *Railway Age* of November 22, page 889.

Supply Trade

L. J. Garber has been appointed representative of the **Buffalo Brake Beam Company** and the **Unit Truck Corporation**, with headquarters in St. Louis, Mo.

James B. Hayden, sales manager of the **Industrial Brownhoist Corporation**, Bay City, Mich., has been elected vice-president in charge of sales.

F. H. Lindus has been transferred by the **Timken Roller Bearing Company** to sales promotion work, with headquarters at Canton, Ohio.

H. L. Hamilton, president of the **Electro-Motive Corporation**, has been elected a vice-president of the **General Motors Corporation**.

Howard I. Prentice, whose promotion to manager of sales of the **Cleveland Frog & Crossing Company**, Cleveland, Ohio, was reported in the *Railway Age* of January 3, graduated in civil engineering



Howard I. Prentice

from the Case School of Applied Science in 1911 and in 1912 joined the engineering department of the **Cleveland Frog & Crossing Company**. In 1928 he was made sales engineer, which position he held until his recent appointment.

Ralph E. Keller, engineer of the **Kalamazoo Railway Supply Company**, has been promoted to sales manager and chief engineer, with headquarters as before at Kalamazoo, Mich.

R. E. Bingman has been appointed district manager, Indiana territory, by the **Jessop Steel Company** of Washington, Pa., with headquarters at 617 Architects & Builders Building, Indianapolis, Ind.

Frank A. Streiff has been appointed southeastern sales manager of the Southern Wheel division of the **American Brake Shoe & Foundry Co.**, with headquarters

at Portsmouth, Va., from which point he has represented the Southern Wheel and Brake Shoe and Castings divisions of this company since 1935. Mr. Streiff will continue to represent the Brake Shoe and Castings division in addition to his other duties.

Frank L. Murphy has been appointed chief engineer of the **Pullman-Standard Car Manufacturing Company**, in charge of all engineering of railway cars and transit equipment, with principal office at



Frank L. Murphy

the Pullman Car Works (Chicago), effective January 1. Mr. Murphy was born in Chicago on November 25, 1900, and graduated in mechanical engineering from Purdue University in 1922. He immediately entered the railway car manufacturing field as a freight car draftsman for Pullman and has continuously served the Pullman organization since that time, devoting most of his effort in recent years to the passenger car field. In January, 1928, he became assistant to the passenger car engineer. In 1932, and for a number of years, he specialized in adapting mechanical air conditioning to both Pullman and railroad cars. In 1935, he was appointed principal engineer at the Pullman car works, and in 1940 he assumed the duties of acting chief engineer, which continued until his recent appointment.

Dwight A. Bessmer, a buyer in the purchasing department of the **Timken Roller Bearing Company**, Canton, Ohio, has been promoted to assistant director of purchases.

J. Rogers Davis, who joined the **Chicago Pneumatic Tool Company** in December, has been appointed supervisor of branches, a newly created office, to assist in the sales activities of the company's district and sub-district offices.

A. G. Jones has been appointed district manager of the Pacific district central station-transportation department, and **S. W. Scarfe**, manager of the Los Angeles, Cal., central station department of the **General Electric Company**.

Harold F. Dunbar, general sales manager of the **McConway & Torley Corporation**, Pittsburgh, Pa., has been elected a vice-president of that company, with

which he has been identified for more than 20 years.

Mather Garland has been appointed sales manager of the **Garland Ventilator Company** for the Middle West territory, with headquarters at Chicago, instead of for the entire country as incorrectly reported in the *Railway Age* of December 20.

Earnest W. Harwell, district sales manager for the **Jones & Laughlin Steel Corporation**, at Memphis, Tenn., has been transferred to Chicago, succeeding **S. A. Fuller**, who has been transferred to New York.

W. L. Kennicott, previously Los Angeles, Cal., sales manager of the **McKenna Metals Company**, is now at the company's head office and factory at Latrobe, Pa., in the management of sales and engineering of Kennametal tools and their applications.

Max W. Babb, president of the **Allis-Chalmers Manufacturing Company**, Milwaukee, Wis., has been elected chairman of the board, a position which has been vacant since the death of **Otto H. Falk** on May 21, 1940. **W. C. Buchanan**, a director and member of the executive committee, has been elected president, succeeding Mr. Babb.

E. P. Waller, assistant to E. O. Shreve, vice-president in charge of apparatus sales, **General Electric Company**, retired January 1, after 41 years of service. Mr. Waller was born in Martinsville, Va. Fol-



E. P. Waller

lowing his graduation from the Virginia Polytechnic Institute in 1900, he went with General Electric, at Schenectady, N. Y., as a student engineer on the "test" course. Two years later he became associated with the G. E. publication bureau, forerunner of the present publicity department. When the "General Electric Review" was instituted, Mr. Waller was appointed associate editor, leaving in 1903 to take up commercial work in the company's railway department. Nine years later he was named assistant manager of the railway department and, in 1922, became manager of the department, which later was renamed the transportation department. In 1939, after having been manager of the G. E. transportation department for 17 years,

Mr. Waller was made an assistant to Mr. Shreve.

OBITUARY

Arthur Aigeltinger, vice-president of the **American Brake Shoe & Foundry Co.** in New York, died December 30.

Clarence J. Flath, secretary of the **O. S. Flath Company**, Chicago, died on January 5 at his home in Chicago.

Claude C. Cueman, a designer of locomotives for the **American Locomotive Company**, died December 28 at his home in Ridgewood, N. J. He was 61 years of age.

Ernest Lunn, mechanical engineer of the **Super-Gear Drive Corporation**, Chicago, and at one time electrical engineer of the **Pullman Company** and later of the **Pullman-Standard Car Manufacturing Company**, died at his home in Chicago on January 6, after an illness of about a week.

Equipment and Supplies

LOCOMOTIVES

THE **CHESAPEAKE & OHIO** is inquiring for 15 steam switching locomotives of the 0-8-0 type.

THE **CHILEAN NITRATE SALES CORPORATION** has ordered eight 40-ton Diesel-electric mining locomotives from the **General Electric Company**.

THE **NEW YORK CENTRAL** is reported to be considering the purchase of a number of Diesel-electric and steam locomotives, the latter for both the carrier's own use and for the **Pittsburgh & Lake Erie**

FREIGHT CARS

C. & N. W. to Purchase 1,775 Cars

The **Chicago & North Western** is reported to be inquiring for a total of 1,775 new freight cars including the following:

- 1,000—50-ton gondola cars
- 500—50-ton box cars
- 250—50-ton flat cars
- 25—50-ton cement cars

A. C. L. Inquiring for 2,000 Freight Cars

The **Atlantic Coast Line** has issued inquiries for a total of 2,000 freight cars, including the following:

- 1,100—50-ton steel sheathed auto-box cars
- 400—55-ton twin hopper cars
- 300—50-ton, 41½-ft. high side gondola cars
- 100—50-ton, 53½-ft. S. U. flat cars with wood floors
- 100—70-ton, 35-ft. 9-in. covered phosphate cars

U. S. Government Buys 5,016 Freight Cars for Export

The **United States Government** has placed orders for a total of 5,016 new freight cars for export (probably to Egypt

and Iran) including 3,850 eight-wheel cars and 1,166 four-wheel cars. Inquiries for this equipment were reported in the *Railway Age* issues of December 6 and December 20. The order was placed as follows:

- 2,000—40-ton, 8-wheel box cars—**American Car & Foundry Co.**
- 900—40-ton, 8-wheel high side gondola cars—**Pullman-Standard Car Manufacturing Company.**
- 600—40-ton, 8-wheel low side gondola cars—**Pullman-Standard Car Manufacturing Company.**
- 350—10,000-gal. 8-wheel tank cars—**General American Transportation Corporation.**
- 1,000—20-ton, 4-wheel box cars—**Pullman-Standard Car Manufacturing Company.**
- 166—20-ton, 4-wheel caboose cars—**American Car & Foundry Co.**

L. & N. Orders 3,425 Freight Cars

The **Louisville & Nashville** has let one of the largest orders of recent months placed with contract car builders with the purchase of a total of 3,425 freight cars comprising the following:

- 750—50-ton steel twin hopper cars—**American Car & Foundry Co.**
- 500—50-ton, 40½-ft. steel sheathed box cars—**American Car & Foundry Co.**
- 100—70-ton covered hopper cars—**American Car & Foundry Co.**
- 400—50-ton, 40½-ft. steel box cars—**Pullman-Standard Car Manufacturing Co.**
- 750—50-ton steel hopper cars—**Pullman-Standard Car Manufacturing Co.**
- 100—50-ton, 50½-ft. steel box cars—**Pullman-Standard Car Manufacturing Co.**
- 225—50-ton, 40½-ft. steel box cars—**Pullman-Standard Car Manufacturing Co.**
- 500—50-ton steel hopper cars—**Pressed Steel Car Company.**
- 100—50-ton flat cars—**Mount Vernon Car Manufacturing Company.**

* For the Atlanta & West Point.

THE **ATLANTIC REFINING COMPANY** is inquiring for eight tank cars of 40 tons' capacity for export to Brazil.

THE **RUBBER RESERVE COMPANY** is inquiring for 50 tank cars of 50 tons' capacity.

THE **NEW YORK CENTRAL** is reported to be contemplating the acquisition of a substantial number of new freight cars.

THE **DETROIT, TOLEDO & IRONTON** is inquiring for 50 flat cars of 50 tons' capacity and 70 gondola cars of 50 or 70 tons' capacity.

THE **CHESAPEAKE & OHIO** has placed an order for 1,000 all-steel hopper cars of 50 tons' capacity with the **American Car & Foundry Co.** at a reported cost of \$2,560,000.

THE **CHICAGO, ROCK ISLAND & PACIFIC** has issued inquiries for a total of 775 freight cars as follows:

- 300—50½-ft., 50-ton auto-box cars
- 300—53-ft., 50-ton flat cars
- 150—34-ft., 50-ton open-top twin hopper cars
- 25—35-ft., 70-ton covered hopper cars

THE **BALTIMORE & OHIO** has begun the construction of 100 new bay window-type cabooses at its own shops. This order was reported in the *Railway Age* of May 24, 1941, but construction had been held up because of difficulty in securing materials.

THE **UNITED STATES WAR DEPARTMENT** has ordered 2,000 box cars and 166 caboose cars from the **American Car & Foundry Co.**, for export to Egypt and Iran. An inquiry for these cars was reported in the *Railway Age* of December 6 and December 20.

Construction

BESSEMER & LAKE ERIE.—A contract amounting to approximately \$75,000 has been awarded the Great Lakes Dredge & Dock Company, Cleveland, Ohio, for enlarging the winding basin at Conneaut, Ohio, in order to turn longer boats. The contract covers only the actual construction work and in addition the railroad company will furnish all material required in the construction and do all the necessary track and other miscellaneous work. This work requires the removal of 181 ft. of heavy reinforced concrete dock and 295 ft. of heavy mass concrete dock set on piles and the construction of a new dock back of the location of the present dock. The new dock will be built of heavy steel sheet piling on which will be built a heavy concrete slab. This will be anchored by heavy reinforced concrete anchorage extending back of the dock to a heavy reinforced concrete deadman. The dock slab and anchorages will be supported by H-beam steel piles. In addition to this heavy dock construction, there will also be 181 ft. of steel sheet piling bulkhead, with a lighter concrete slab on top, to enclose an old ferry slip near the work, which slip, after the construction of the bulkhead, will be filled and made available for other use.

DENVER & RIO GRANDE WESTERN.—The State Highway department of Colorado has awarded a contract amounting to approximately \$104,000 to the Colorado Bridge and Construction Company, Denver, Colo., for the construction of a bridge on the D. & R. G. W. over U. S. Highways 24 and 6 in Mesa county, Colo. The bridge will consist of three 45-ft. I-beam spans with a ballast deck. The contract also includes the construction of an overflow bridge adjacent to the highway underpass, which will consist of four 40-ft. steel spans on reinforced concrete piling.

FT. WORTH & DENVER CITY.—A contract has been awarded the Ed H. Honnen Construction Company, Colorado Springs, Colo., for the grading work on a line change 3.27 miles long at Magenta, Tex.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—A contract has been awarded the Stahr-Burgum Company, Minneapolis, Minn., for the reconstruction of a section of the Shoreham (Minneapolis, Minn.) Coach Shop. The work will cost approximately \$70,000.

UNION PACIFIC.—Additional roundhouse facilities are being constructed at Green River, Wyo., at a cost of approximately \$144,000. The work includes the construction of one additional engine stall 178 ft. in length, the lengthening of two existing stalls to 178 ft., the extension of five other stalls to make them 156 ft. long and the installation of a 75-ton electric drop table and pit extending across three stalls to replace the present drop table and pits. A contract amounting to \$80,000 has been awarded the James Leck Company, Minneapolis, Minn., in connection with this work.

Financial

BALTIMORE & OHIO.—*Abandonment of Passenger Operations.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon its passenger operations between Philadelphia, Pa., and New York City over the Central of New Jersey and the Reading, a total distance of 88.5 miles. The authority was granted so as to permit the B. & O. to cease operation as of December 31, 1941, upon the condition that joint through passenger train service be established, effective as of the same date, between Philadelphia and New York City, over lines of the Reading and the Central of New Jersey. The reason assigned by the carrier for ceasing the operation under trackage rights was a new tax law in New Jersey under which it will be assessed much larger taxes than it is now paying. Details of the application were set out in the *Railway Age* of December 13, 1941, page 1011.

BOSTON & MAINE-MAINE CENTRAL.—*Operation.*—The Boston & Maine has been authorized by Division 4 of the Interstate Commerce Commission to continue its operation under trackage rights over lines of the Maine Central between Waumbek Junction, N. H., and Coos Junction, 11 miles, and between Whitefield, N. H., and Fabyan, 15 miles. At the same time the Maine Central has been given authority to operate under trackage rights over a line of the B. & M. from Coos Junction, N. H., to Groveton, nine miles. The present operating agreement for these lines expires on December 31, 1945, and can be extended at that time for another 20 years. As a result of the commission's action, the roads will increase the length of the extension from 20 to 99 years.

Control of the Franklin & Tilton.—The Boston & Maine has been authorized by Division 4 of the Interstate Commerce Commission to acquire control of the Franklin & Tilton through ownership of its capital stock.

CHICAGO & NORTH WESTERN.—*Approves Sale of Equipment Trust Certificates.*—On January 5, Federal Judge John P. Barnes approved the sale on December 16 of \$3,800,000 of equipment trust certificates, as reported in the *Railway Age* of December 20.

CHICAGO & NORTH WESTERN.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for \$3,800,000 of 2½ per cent equipment trust certificates, maturing in 10 equal annual installments of \$380,000 on January 1 in each of the years from 1943 to 1952, inclusive. The issue has been sold at 100.31 to Harris, Hall & Co., making the average annual cost to the company approximately 2.3 per cent.

CHICAGO, ROCK ISLAND & PACIFIC.—*Reorganization.*—Holders of first and refunding mortgage four per cent bonds and secured 4½ per cent bonds of the Chicago,

Rock Island & Pacific, and a protective committee for holders of the Choctaw & Memphis first mortgage five per cent bonds and consolidated mortgage five per cent bonds of the Choctaw, Oklahoma & Gulf have asked the Interstate Commerce Commission to transmit to the federal district court in Chicago certain schedules and explanatory notes prepared by the commission which relate to its plan of reorganization for the Rock Island. The Reconstruction Finance Corporation has joined in the request.

The district court has already ordered all parties to the reorganization to show cause on or before December 31 as to why the plan should not be disapproved and referred back to the commission. The petition also informs the commission that the parties to the Chicago, Milwaukee, St. Paul & Pacific and the Western Pacific reorganizations are planning to appeal the two cases from the circuit courts of appeals to the United States Supreme Court for a final determination.

However, the parties to the petition feel that the commission's plan of allocating securities in the Rock Island case is different from that used in the Western Pacific and the Milwaukee cases and should be approved.

MISSOURI PACIFIC.—*Abandonment.*—This company has asked authority from the Interstate Commerce Commission to abandon a part of its Pike City branch extending from Delight, Ark., to Kraft Spur, 4.5 miles.

PENNSYLVANIA.—*Trackage Rights.*—The Pennsylvania, Ohio & Detroit, a wholly-owned subsidiary of this company, has asked Interstate Commerce Commission authority to acquire trackage rights over portions of the Pittsburgh, Cincinnati, Chicago & St. Louis between Trinway, Ohio, and Newcomerstown, 29 miles, and over the Cleveland & Pittsburgh between Dover, Ohio, and Hudson, 71 miles.

PENNSYLVANIA.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for \$18,465,000 of equipment trust certificates, maturing in 15 equal annual installments of \$1,231,000 on January 1 in each of the years from 1943 to 1957, inclusive. The issue has been sold at 100.18, to Salomon Brothers & Hutzler of New York, and associates, making the average annual cost to the company approximately 2.4 per cent.

PENNSYLVANIA-CENTRAL OF NEW JERSEY.—*Bonds of the New York & Long Branch.*—The New York & Long Branch, which is owned jointly by the Pennsylvania and the Central of New Jersey, has asked the Interstate Commerce Commission for authority to issue \$2,932,000 of series B, four per cent, consolidated mortgage bonds, maturing September 1, 1981, and the proceeds to be used in part to refund a like amount of general mortgage bonds which matured on September 1, 1941. The bonds which have been outstanding in the hands of the public total \$1,586,000, but recently the two proprietary companies furnished

the money to take them up, with the result that they each will receive one half of the amount in new bonds for the cash advanced.

Also, for the bonds that they now hold, the Pennsylvania will get \$463,000 of new bonds and the Central of New Jersey, \$451,000. Out of the proceeds of the new issue some \$432,000 will be delivered to the company's treasury to reimburse it for expenditures already made.

WABASH.—Receivership.—The newly-reorganized Wabash has been authorized by Division 4 of the Interstate Commerce Commission to take over and operate the assets and property of the old company. Specifically, the order approves the purchase by the new company, the Wabash Railroad, of the railroad properties and other assets of the Wabash Railway, the old company, and authorizes the operation by the new company of such railroads including those operated under contract, lease, or agreement, and acquisition of control by the new company through ownership of capital stock of certain other railroad companies. The new company is also permitted to issue 598,186 shares of common stock of no par value, to be deposited in escrow under an escrow agreement, to be executed with the Bank of Manhattan Company.

Commissioner Mahaffie wrote a short dissenting opinion in which he complained that the new company had not carried out certain conditions which had been attached to the commission's initial approval of the securities to be issued under the reorganization plan. He saw no reason for imposing conditions, "if on such representations as are here made, we are prepared to waive compliance with them."

WHEELING & LAKE ERIE.—Equipment Trust Certificates.—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for \$1,050,000 of equipment trust certificates, maturing in 10 equal annual installments of \$105,000 on January 1 in each of the years from 1943 to 1952, inclusive. The certificates of the several maturities will have dividend warrants attached entitling the holder to dividends payable semiannually on January 1 and July 1 at the following rates per year: Those maturing on January 1, 1943, 0.50 per cent; those maturing on January 1, 1944, 0.875 per cent; those maturing on January 1, 1945, 1.125 per cent; those maturing on January 1, 1946, 1.375 per cent; the rates for subsequent maturities increasing by one-eighth of one per cent for each succeeding installment, to 2.125 per cent for those maturing on January 1, 1952.

The issue has been sold at 99.30 to a group comprised of Salomon Brothers & Hutzler, Dick & Merle-Smith, and Stroud & Co., Inc., making the average annual cost to the company approximately 1.86 per cent.

Average Prices of Stocks and Bonds

	Jan. 6	Last week	Last year
Average price of 20 representative railway stocks..	28.05	26.45	30.02
Average price of 20 representative railway bonds..	64.30	63.20	62.36

Railway Officers

EXECUTIVE

J. F. Forner has been appointed office assistant to vice-president and general manager of the Delaware & Hudson, with headquarters at Albany, N. Y.

Vaile S. Andrus, manager of the bureau of transportation research of the Southern Pacific, has been promoted to assistant to the president, with headquarters as before at San Francisco, Cal. Mr. Andrus entered Southern Pacific service in 1908 as a station agent on the Shasta division, later serving as a brakeman for two years at Dunsmuir, Cal. He was then assigned to special operating department duties and later appointed transportation



Vaile S. Andrus

inspector. In 1916 he was appointed assistant trainmaster on the Western division and in 1918 he was promoted to trainmaster on the Salt Lake division. In 1920 Mr. Andrus was advanced to assistant superintendent of transportation and assigned to work in which he specialized in operating analyses and railroad statistical studies. Continuing in this type of work, he was appointed assistant to the general manager in 1925 and manager of the bureau of transportation research in 1932.

Karl W. Fischer, formerly land and tax commissioner of the Chicago, Burlington & Quincy, with headquarters at Chicago, who for the last 19 months has served at Washington, D. C., as deputy transportation commissioner of the Advisory Commission to the National Defense Council, has been appointed assistant to the president of the Burlington Lines (including, in addition to the Burlington, the Colorado & Southern, the Ft. Worth & Denver City and the Wichita Valley), with headquarters at Chicago.

Glenn H. Caley, general manager of the Delaware & Hudson, has been elected vice-president and general manager in charge of operations, maintenance, construction, purchases and stores, with headquarters as before at Albany, N. Y., effective

January 1. **Thomas L. Ennis**, general counsel, has been elected vice-president and general counsel, in charge of the Law de-



Glenn H. Caley

partment, with headquarters as before at New York, effective January 1.

Mr. Caley was born on October 25, 1888, at Middletown, N. Y., and entered railroad service on January 9, 1905, with the New York, Ontario & Western, serving in various positions including electrical and signal engineer. From April 1, 1937, to June, 1938, Mr. Caley was general manager of the New York, Ontario & Western and in June, 1938, he was appointed general manager of the Delaware & Hudson.

Mr. Ennis was born on May 8, 1891, at Rotterdam Junction, N. Y., and received his Bachelor of Science degree in 1914 from Union College, Schenectady, N. Y., and his LL.B. in 1917 from Columbia Law School, New York. Mr. Ennis practiced law with the firm of Hughes, Schurman & Dwight from 1919 to 1927. On April 1, 1927, he became assistant to general counsel of the Delaware & Hudson, hold-



Thomas L. Ennis

ing this position until January 1, 1935, when he became general counsel. Mr. Ennis is also a member of the Board of Managers.

William Robertson Coe, vice-president, director and chairman of the executive committee of the Virginian, with headquarters at New York, resigned on January 1. Mr. Coe was born at Worcester-shire, England, on June 8, 1869, and was

educated at Albion Academy, Cardiff, Wales. Mr. Coe began his career in December, 1884, with the insurance firm of Johnson & Higgins at Philadelphia, becoming manager of the adjusting department at New York in January, 1893. He was elected a director of that firm in 1902 and from 1910 to 1916 he was president, then becoming chairman of the board. Since 1916 Mr. Coe has been active in the affairs of the Virginian as director, vice-president and chairman of the executive committee. Mr. Coe is the father of William Rogers Coe, whose election as vice-president, to succeed his father, was reported in the *Railway Age* of December 13.

Thomas J. Thomas, assistant to the president of the Chicago, Burlington & Quincy and president of the Valier Coal Company, with headquarters at Chicago, has been appointed associate director of Solid Fuels Coordination in charge of bituminous coal, by Secretary of the Interior, Harold L. Ickes.

Henry Wolf Bikle, general counsel of the Pennsylvania, with headquarters at Philadelphia, Pa., has been appointed vice-president—law and **John Dickinson**, general solicitor, has been appointed general counsel.

Mr. Bikle was born at Gettysburg, Pa., on October 20, 1877, and attended Steven's



Henry Wolf Bikle

Hall, Gettysburg, and Gettysburg College, receiving his A.B. degree in 1897 and his LL.D. in 1928. Mr. Bikle studied law in the office of William McClean in Gettysburg until the fall of 1898, when he entered the law department of the University of Pennsylvania, graduating in 1901, and in June, 1901, he was admitted to the Philadelphia Bar. He engaged in general practice prior to his entering the service of the Pennsylvania on December 1, 1907, as assistant general solicitor. On July 1, 1916, Mr. Bikle was appointed assistant general counsel and on December 1, 1922, he became general attorney. He was promoted to general counsel on October 1, 1932, the position he held until December 17, 1941, when he was appointed vice-president—law. Since 1904 Mr. Bikle has been lecturer, assistant professor, and professor of law at the University of Pennsylvania, conducting classes on Carriers and Constitutional Laws.

Mr. Dickinson was born on February

24, 1894, in Maryland and was educated at the Boys Latin School, Baltimore, Md., receiving his A.B. degree from Johns Hopkins University in 1913 and his Ph.D. from



John Dickinson

Princeton University in 1919. He served as instructor in history and economics at Harvard College during his law course, receiving his degree from the Law School in 1921. Mr. Dickinson served his legal apprenticeship in New York and was admitted to the Bar of California in 1922, where he practiced for several years. In 1929 Mr. Dickinson became professor of law at the University of Pennsylvania and for several years he was associated with the law firm of Sullivan & Cromwell in New York. From 1933 to 1935 Mr. Dickinson was assistant secretary of commerce of the United States and in 1934 and 1935 he was chairman of the Central Statistical Board of the federal government. In 1935 he became assistant attorney general of the United States. On February 1, 1937, Mr. Dickinson entered the service of the Pennsylvania as general solicitor, the position he held until his recent appointment as general counsel, effective December 17, 1941.

FINANCIAL, LEGAL AND ACCOUNTING

J. R. Black, Jr., assistant auditor disbursements of the Pennsylvania, has been appointed assistant comptroller, with headquarters as before at Philadelphia, Pa.

Donald B. Stein, tax accountant of the Reading, with headquarters at Philadelphia, Pa., has been appointed assistant to comptroller.

C. W. Brown, Jr., assistant to the secretary and treasurer of the Virginian, has been elected secretary and assistant treasurer, with headquarters at New York. The position of assistant to the secretary and treasurer has been abolished.

OPERATING

B. R. Dew, assistant superintendent on the Chicago, Rock Island & Pacific at Des Moines, Iowa, has been promoted to superintendent of the Cedar Rapids division, with headquarters at Cedar Rapids, Iowa, succeeding **J. H. Johnson**, who has been transferred to the Des Moines division,

with headquarters at Des Moines, Iowa. Mr. Johnson relieves **Charles C. Cunningham**, who has been transferred to the Western division, with headquarters at Fairbury, Neb., replacing **Francis Nugent**, who retired on January 1.

Mr. Nugent was born at Waterloo, Iowa, on April 15, 1878, and graduated in civil engineering from the University of Iowa in 1903. He entered railway service after graduation as a material clerk on the Rock Island at Silvis, Ill. Later he transferred to the engineering and maintenance of way department and, in 1909, he was promoted to roadmaster, with headquarters at Cedar Rapids, Iowa. Later that year he was appointed assistant engineer, with the same headquarters, and in 1910, he was placed in charge of the construction of a yard at Cedar Rapids. In 1911, he was advanced to office engineer, with headquarters at Chicago, and on February 1, 1912, he was promoted to division engineer, with headquarters at Little Rock, Ark. He then served as division engineer and office engineer on various divisions on the Rock Island, later being appointed division engineer of the Nebraska-Colorado division, with headquarters at Fairbury. On January 1, 1929, he was transferred to the Iowa division, with headquarters at Des Moines, Iowa, and in June, 1930, he was advanced to trainmaster on that division. Mr. Nugent was later transferred to Fairbury and on February 1, 1939, he was promoted to superintendent of the Western division, with the same headquarters, the position he held until his retirement.

F. R. Hoon has been appointed superintendent stations and transfers of the Central region of the Pennsylvania, with headquarters at Pittsburgh, Pa.

R. D. Henry has been appointed chief train dispatcher of the New York Central, with headquarters at Albany, N. Y., succeeding **C. A. Hoffman**, who has retired after 46 years of service.

R. A. J. Morrison, assistant superintendent of the Pittsburgh division of the Baltimore & Ohio, with headquarters at Pittsburgh, Pa., has been promoted to su-



R. A. J. Morrison

perintendent of the Wheeling division, at Wheeling, W. Va., succeeding **O. C. Lott**, who has been transferred to the Pittsburgh division, at Pittsburgh, Pa., to succeed

John Hewes, Jr., whose appointment as superintendent car service at Baltimore, Md., was reported in the *Railway Age* of November 8, 1941. **H. D. Graffious** has been appointed assistant superintendent of the Pittsburgh division at Pittsburgh, succeeding Mr. Morrison. Mr. Morrison was born at Cincinnati, Ohio, and attended Sheffield Scientific School at Yale University. He entered railroad service on July 21, 1921, with the Baltimore & Ohio as assistant on corps, being appointed assistant trainmaster on May 1, 1923. On November 1, 1923, he again became assistant on corps, becoming transportation inspector on March 1, 1925, and assistant on corps on May 2, 1925. He was appointed trainmaster on July 1, 1926, and assistant superintendent at Pittsburgh, Pa., on December 31, 1940. He was appointed superintendent of the Wheeling division on October 1, 1941.

Elzear J. Brown, district engineer maintenance of way on the Chicago, Burlington & Quincy, with headquarters at Galesburg, Ill., has been promoted to assistant superintendent of the Galesburg-Beardstown division, a newly created position, with the same headquarters.

R. E. McGuire, assistant trainmaster of the Scioto division of the Norfolk & Western, with headquarters at Portsmouth, Ohio, has been promoted to trainmaster of the Radford division at Roanoke, Va. **J. E. Lightfoot**, general yardmaster at Eckman, W. Va., has been promoted to assistant trainmaster at Portsmouth, succeeding Mr. McGuire.

TRAFFIC

I. F. Kurtz, assistant coal freight agent of the Lehigh Valley at New York, has been promoted to coal freight agent.

E. B. Herrington has been appointed assistant general freight agent on the Missouri Pacific at St. Louis, Mo., a newly created position.

C. S. Durham has been appointed assistant general traffic agent of the Norfolk Southern at New Bern, N. C. **Hugh W. Johnston** has been appointed industrial engineer at Norfolk, Va.

Donald Sutherland, Jr., traveling freight agent for the Union Pacific at Kansas City, Mo., has been promoted to general agent at Lincoln, Neb., succeeding **A. D. Grant**, who retired from service on December 31.

A. M. Glassmeyer, assistant to freight traffic manager-solicitation, with headquarters at Cincinnati, Ohio, has been promoted to assistant freight traffic manager-solicitation, with the same headquarters, a change of title.

A. F. Schafhirt, general freight agent, rates and divisions, of the Virginian, has been promoted to assistant freight traffic manager, rates and divisions, with headquarters as before at Norfolk, Va. **J. S. Branch**, general freight agent (solicitation), has been appointed general freight

and passenger agent. **J. F. Smith**, assistant general freight agent, has been promoted to general freight agent, rates and divisions, succeeding Mr. Schafhirt. The position of assistant general freight agent has been abolished. **L. W. Woody**, assistant general passenger agent at Norfolk retired on December 31 after more than 30 years of service.

E. M. Hess has been appointed assistant general freight agent of the New York Central, with headquarters at Washington, D. C. **C. D. Hainke** has been appointed general agent, freight department, Washington, D. C. **O. H. Grimm** has been appointed assistant general agent at New York.

George W. Stradtman, division passenger agent of the Central of Georgia, with headquarters at Atlanta, Ga., has been promoted to assistant general passenger agent at Savannah, Ga. **O. Bledsoe**, city passenger and ticket agent at Atlanta, has been promoted to division passenger agent, to succeed Mr. Stradtman.

J. P. Dugan, general baggage and milk agent of the Baltimore & Ohio, has been appointed manager of mail, express and baggage traffic, with headquarters as before at Baltimore, Md. **J. C. McCahan**, manager of mail and express traffic, retired on December 31, 1941. **T. E. Reese** has been appointed superintendent of mail traffic and **D. E. Green** has been appointed superintendent of express traffic.

William G. Paradise has been appointed an engineer in the General Merchandise division of the Freight Container Bureau of the Association of American Railroads, succeeding **J. W. Morrissey**, resigned. Mr. Paradise was born in Iowa and received his Bachelor of Science degree in mechanical engineering at the University of Nebraska. His previous business experience has been with the Electro-Motive Corporation, the U. S. Gypsum Company and the Chicago, Burlington & Quincy.

W. M. Smothers, industrial agent for the Baltimore & Ohio, the Baltimore & Ohio Chicago Terminal and the Alton at Chicago, has been appointed industrial agent for the B. & O. C. T. and the Alton, with the same headquarters. This change is occasioned by the creation of a separate independent industrial department for the Alton and the B. & O. C. T. The territories on the B. & O. in the Chicago territory and the Central and Southern Illinois territory will be handled by the industrial department offices of the B. & O. at Pittsburgh, Pa., and Cincinnati, Ohio, respectively.

Wallace D. O'Brien, assistant general freight agent on the Great Northern, with headquarters at St. Paul, Minn., has been promoted to general freight agent, with the same headquarters, succeeding **Walter R. Sedin**, whose death on December 28 is reported elsewhere in these columns. Mr. O'Brien was born at St. Paul on December 7, 1896, and attended St. Thomas Military Academy, the University of Minnesota, St. Paul College of Law, the Catholic Univer-

sity in Washington (D. C.) and later took post graduate work at the Ecole des Hautes Etudes Sociales in Paris, France. He entered railway service in 1916 as a tariff inspector on the Great Northern and



Wallace D. O'Brien

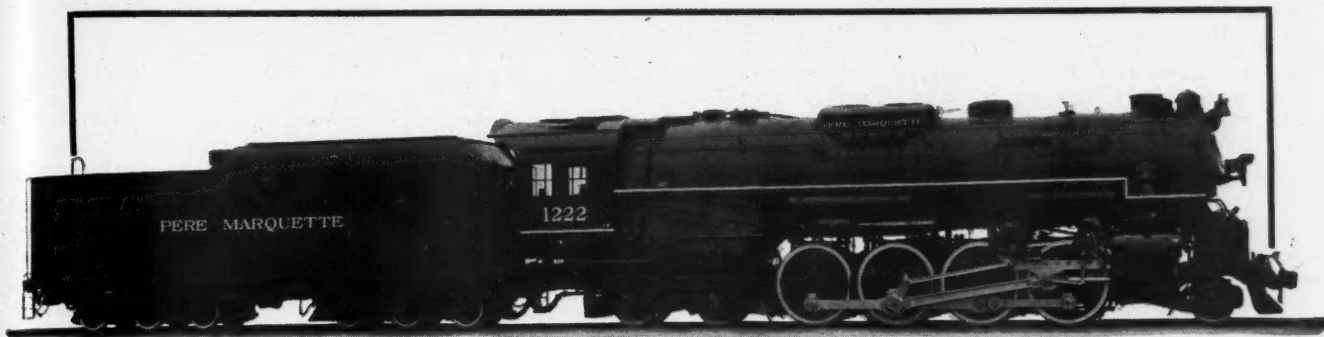
a year later was appointed traveling freight agent. From 1918 through May, 1920, he served as a first lieutenant in the 349th U. S. Infantry in France and as assistant comptroller of supplies for the American Red Cross relief work in Europe. In 1920 he returned to the Great Northern as general agent at St. Paul and in 1928 he was promoted to assistant general freight agent, which position he held until his recent promotion.

Malcolm W. Roper, whose promotion to freight traffic manager of the Western Pacific, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of December 6, was born at San Francisco on August 6, 1905, and entered railway service in October, 1923, as an office boy in the general freight office of the Western Pacific at San Francisco. He was later advanced through various positions to chief rate clerk and on October 20, 1931, he was appointed traveling freight and passenger agent at Seattle,



Malcolm W. Roper

Wash. On November 16, 1936, he was promoted to assistant general freight agent at San Francisco and on June 15, 1937, he was advanced to assistant freight traffic manager in charge of rates and divi-



Cylinders (Dia. —26" Stroke—34" ● Driving Wheel Dia.—69" ● Total Weight Engine & Tender 2/3 Loaded—727,300 lbs. ● Tender 2/3 Loaded—284,800 lbs.

Boiler Pressure—245 lbs. ● Weight on Drivers—277,600 lbs. ● Tractive Power, Main Cylinders—69,350 lbs.

Lima Power

AT WORK

ON THE PERE MARQUETTE

These 15 locomotives of the Class N type are being satisfactorily used by the Pere Marquette in fast freight service between Chicago, Ill., and Detroit, Mich., and also in heavy freight service between Toledo, Ohio and Saginaw, Mich. The increasing demands for quick deliveries on the part of shippers has brought about an entirely new concept of the handling of freight. Today, fast freight schedules must closely paral-

**PERE
MARQUETTE**

lel those of "crack" passenger trains while the heavy freights of today are running on schedules that would have been considered good for the fast freights of a few years ago.

The performance of these locomotives has been so successful that an additional order for 12 new locomotives was placed. These locomotives have been delivered and are being used in the same services.



LOCOMOTIVE WORKS, INCORPORATED, LIMA, OHIO

sions, which position he held until his recent promotion, effective December 1.

ENGINEERING AND SIGNALING

W. H. Bettis, maintenance engineer of the Norfolk & Western, has been appointed assistant engineer, with headquarters at Roanoke, Va., succeeding the late **O. V. Parsons**. **B. E. Crumpler**, draftsman in the engineering department, has been promoted to maintenance engineer, succeeding Mr. Bettis.

Herbert R. Clarke, engineer maintenance of way of the Burlington Lines (including the Chicago, Burlington & Quincy, the Colorado & Southern, the Ft. Worth & Denver City and the Wichita Valley), with headquarters at Chicago, has been promoted to chief engineer maintenance of way, with the same headquarters.

Harry C. Lorenzen, assistant signal engineer of the Pere Marquette, with headquarters at Detroit, Mich., has been appointed signal engineer and superintendent of telegraph, with the same headquarters as before, effective January 1, succeeding **George W. Trout**, whose death on December 13 was reported in the *Railway Age* of December 20. Mr. Lorenzen was



Harry C. Lorenzen

born in Detroit on May 9, 1883, and entered railway service with the Michigan Central as a signal helper in August, 1902, serving during the next three years as a signal fitter on signal construction work. From June, 1905, to April, 1906, he was a maintainer on the New York subways for the Interborough Rapid Transit Company, resigning on the latter date to go with the New York Central as a signal inspector on construction in the electrified zone. He returned to the Michigan Central in August, 1907, and was employed as a signal foreman in the construction and maintenance of electric interlockings. In February, 1910, he returned to the New York Central, with headquarters at Albany, N. Y., and for five years held the positions of circuit designer, signal inspector, circuit engineer, office engineer and construction engineer. Mr. Lorenzen left the New York Central in October, 1916, to enter the service of the Pere Marquette as as-

sistant engineer. He was promoted to assistant signal engineer on April 1, 1923, which position he held until his recent promotion.

Charles J. Code, who has been appointed engineer of tests, maintenance of way, of the Pennsylvania, with headquar-



Charles J. Code

ters at Altoona, Pa., as reported in the *Railway Age* of December 13, was born on March 9, 1900, at LaCrosse, Wis. He received his higher education at Carnegie Institute of Technology, graduating in 1921. Previously, he had entered railway service on June 1, 1918, as a chainman on the Monongahela Southern (now part of the Union Railroad), leaving this road on July 16 of the same year to enter military service. On his discharge from the army, Mr. Code returned to college. While still in school he entered the service of the Pennsylvania as a draftsman on the Pittsburgh division on July 16, 1920. He returned to this road on August 16, 1923, as an assistant supervisor of track on the Monongahela division, later being sent to the Pittsburgh division. On October 13, 1926, Mr. Code was promoted to supervisor of track on the Allegheny division, being transferred to the Middle division on January 1, 1928. Two years later he was promoted to division engineer on special duty in the office of the chief engineer, being transferred to the Renovo division on June 1, 1931, and thence to the Panhandle division on July 1, 1933. He was further promoted to assistant to the chief engineer maintenance of way of the Central region, with headquarters at Pittsburgh, Pa., on July 1, 1937, which position he held until his recent promotion to engineer of tests, maintenance of way.

A. G. Reese, engineer maintenance of way of the Colorado & Southern and the Ft. Worth & Denver City, with headquarters at Denver, Colo., has been promoted to district engineer maintenance of way on the Chicago, Burlington & Quincy, with headquarters at Galesburg, Ill., succeeding **Elzear J. Brown**, whose promotion to assistant superintendent at Galesburg is reported elsewhere in these columns. **W. F. Broome**, engineer of the Burlington-Rock Island, with headquarters at Houston, Tex., has been advanced to engineer

maintenance of way of the C. & S. and the Ft. W. & D. C. at Denver, relieving Mr. Reese. **W. A. Gunderson**, district maintenance engineer on the Chicago, Rock Island & Pacific at El Reno, Okla., has been appointed engineer-roadmaster of the Burlington-Rock Island at Houston, replacing Mr. Broome, and **C. B. Murray**, roadmaster on the Rock Island at Pratt, Kan., has been promoted to district maintenance engineer at El Reno, succeeding Mr. Gunderson.

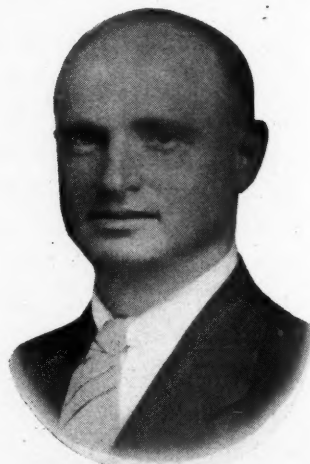
MECHANICAL

R. H. Smith has been appointed master mechanic on the Nashville, Chattanooga & St. Louis at Bruceton, Tenn., succeeding **L. H. McDaniel**, who retired on December 31.

E. G. Staneiforth, boiler foreman of the Denver shop of the Chicago, Burlington & Quincy, has been promoted to general boiler inspector, Lines East, with headquarters at Chicago, succeeding **K. E. Fogerty**, who retired on January 1 after 56 years of service.

George H. Massey, master mechanic on the Central of New Jersey, with headquarters at Jersey City, N. J., has been promoted to assistant superintendent of motive power and rolling equipment, at Elizabethport, N. J., succeeding **F. H. Becherer**, whose appointment as superintendent car department of the Baltimore & Ohio is noted elsewhere in these columns. **R. F. Smalley**, day general foreman on the Central of New Jersey at Commupaw engine terminal, has been promoted to master mechanic at Jersey City, to succeed Mr. Massey.

Ernest P. Gangewere, assistant superintendent of motive power and rolling equipment of the Reading, with headquarters at Reading, Pa., has been promoted to superintendent of motive power and rolling equipment of the Reading and Central of New Jersey, with the same headquar-



Ernest P. Gangewere

ters, succeeding **A. K. Galloway**, whose appointment as general superintendent of motive power and equipment of the Baltimore & Ohio is noted elsewhere in these columns. **Howard Hill**, master mechanic

*More Power from the Steam Locomotives
of Tomorrow...through*

THE
FRANKLIN SYSTEM
OF
STEAM DISTRIBUTION

The Franklin System of Steam Distribution makes available 30 to 40% more horsepower for revenue work — without increasing the size of the locomotive. This large increase is accomplished by means of the following features:

1. Separation of valve events, so that admission, cut-off, release and compression are independently controlled.
2. Absolutely fixed valve events at all speeds and all cut-offs.
3. Large inlet and exhaust passages and improved steam flow.
4. Reduced cylinder clearance volume.
5. Reduced weight of moving masses and reduced mechanical friction.

Through the results obtained by the application of The Franklin System of Steam Distribution it is now possible to build smaller locomotives with the same power or the same size locomotives with even greater power.



FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK
CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

of the Philadelphia (Pa.) division of the Reading, has been promoted to assistant superintendent of motive power and rolling equipment at Reading, succeeding Mr. Gangewere. **J. S. Fennell, Jr.**, master mechanic at Tamaqua, Pa., has been transferred to Philadelphia, succeeding Mr. Hill. **J. L. Madenfort**, foreman enginehouse at Newberry Junction, Pa., has been promoted to master mechanic of the Shamokin division at Tamaqua, to succeed Mr. Fennell.

Mr. Gangewere was born at Bethlehem, Pa., on November 17, 1900, and was educated at Chattanooga (Tenn.) high school. During 1917 and 1918 he worked as apprentice in the machine shop of the Wheeland Machine Company at Chattanooga and later attended Lehigh University, receiving the degree of mechanical engineer in 1922. Mr. Gangewere entered the service of the Reading in July, 1922, as special apprentice on the staff of the assistant superintendent motive power, subsequently becoming motive power inspector. During this time he completed the air brake instruction course with the International Correspondence Schools. In 1925 Mr. Gangewere was promoted to mechanical supervisor and from 1927 to 1933 he served successively as enginehouse foreman at Saucon Creek, Bethlehem, Pa., and assistant master mechanic at Philadelphia, Pa. In 1933 he was appointed assistant superintendent of the Reading locomotive shop. On January 1, 1939, Mr. Gangewere was appointed assistant superintendent of motive power and rolling equipment of the Reading, which position he held until his recent promotion.

A. B. Welch, supervisor of lubrication and valve pilot operation of the Texas & Pacific, has been appointed supervisor maintenance of equipment, with headquarters as before at Dallas, Tex., succeeding **D. M. Vance**, who has been appointed mechanical inspector, with the same headquarters, relieving **H. E. McMurry**, transferred. **M. J. Young**, assistant master mechanic at Ft. Worth, Tex., has been appointed general locomotive inspector, with headquarters at Dallas. The positions of equipment maintenance supervisor and supervisor of lubrication and valve pilot operation have been abolished.

George H. Emerson, chief of motive power and equipment of the Baltimore & Ohio and **John J. Tatum**, assistant chief of motive power and equipment, retired on January 1. **W. B. Whitsitt**, assistant chief of motive power and equipment, has been promoted to chief engineer of motive power and equipment in charge of research, design, standards and new construction. **Alexander K. Galloway**, superintendent of motive power and rolling equipment of the Reading, has been appointed general superintendent of motive power and equipment of the Baltimore & Ohio. **Frank H. Becherer**, assistant superintendent of motive power and rolling equipment of the Central of New Jersey, has been appointed superintendent of the car department of the Baltimore & Ohio. **F. H. Einwaechter, Jr.**, assistant engineer in the locomotive department of the Baltimore & Ohio, has been promoted to mechanical engineer.

All of the above will have their headquarters at Baltimore, Md.

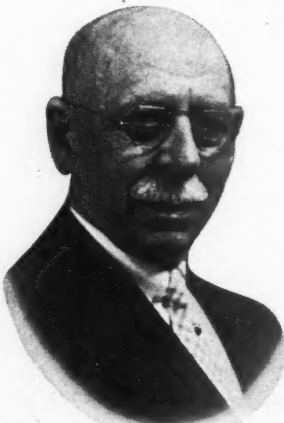
Mr. Emerson entered railway service in 1880 as water boy on the Willmar division of the Great Northern and in April, 1882, he became an apprentice at the St. Paul shops. In October, 1887, he became a boil-



George H. Emerson

ermaker and from September, 1890, to February, 1895, he served as fireman and engineer, Dakota division. Mr. Emerson was locomotive foreman at Glasgow, Mont., from 1895 to 1897, then becoming general shop foreman and master mechanic, Dakota and Northern divisions. In January, 1900, he was appointed general master mechanic of the Western district and in 1903 he became superintendent motive power. He was appointed assistant general manager of the Great Northern in March, 1910, becoming general manager in October, 1912. From October, 1917, to January, 1920, Mr. Emerson was Colonel in command, Russian Railway Service Corps in Siberia. He became chief of motive power and equipment of the Baltimore & Ohio in March, 1920, the position he held until his retirement.

Mr. Tatum was born at Baltimore, Md., on September 17, 1866, and entered rail-



John J. Tatum

road service in 1879 as messenger boy in the Mount Clare shops of the Baltimore & Ohio. For a few years he worked in the locomotive building and repair shops, but in 1881 he became an apprentice in the car department and in 1885 became a car build-

er. Later he served in various supervisory capacities in the car department and in 1907 he was appointed superintendent of freight car equipment. During government control of the railroad during the first World War Mr. Tatum was manager of the car repair section of the United States Railroad Administration. On March 1, 1920, Mr. Tatum returned to the Baltimore & Ohio as superintendent, car department, in charge of both passenger and freight equipment. He was appointed general superintendent of the car department on June 1, 1925, and on June 14, 1937, he was appointed assistant chief of motive power and equipment, which position he held until his retirement.

SPECIAL

Dwight W. Norris, who was associated with the Weldell P. Colton Company, advertising agency for the New York, New Haven & Hartford, has been appointed publicity representative of the New Haven, with headquarters at New York.

John G. Castle, secretary, Board of Pensions, New York Central, has been appointed assistant to manager, personnel. **Frederick P. Fleuchaus** has been appointed secretary, Board of Pensions and **Ira L. Austin** has been appointed assistant secretary, Board of Pensions.

J. W. Shumaker, captain of police on the Panhandle division of the Pennsylvania, has been appointed acting superintendent of police for the Central region, with headquarters as before at Pittsburgh, Pa., succeeding **J. G. Sersch**, who has been granted a leave of absence because of ill health.

W. L. Stanley, vice-president and chief public relations officer of the Seaboard Air Line, with headquarters at Atlanta, Ga., retired on December 31, 1941. Mr. Stanley was born in Wytheville, Va., on May 24, 1871, and received his education at Emory and Henry College and at the Law School of the University of Virginia, after which he practiced law for five years. In 1898 he became associated with the Norfolk & Western as claim adjuster and joined the Seaboard Air Line on September 1, 1901, serving successively as claim agent, claim attorney and general claims attorney. In 1916 he was promoted to assistant to the president. During federal control of the railroads Mr. Stanley was assistant to the federal manager and also staff officer for the Southern region. In 1920, upon return of the railroads to private management he became general attorney for the Seaboard Air Line, which position he held until elected vice-president in 1922. In December, 1930, Mr. Stanley became also chief public relations officer.

R. R. Horner, managing editor of the Norfolk & Western Magazine, has been appointed manager of the railway's magazine and advertising department, with headquarters as before at Roanoke, Va., succeeding **Holcombe Parkes**, who was on leave of absence with the Association of American Railroads until November 15, when he resigned his connections with the A. A. R. and the Norfolk & Western to become assistant to the president of the

Security Brick Arches

*are
designed*

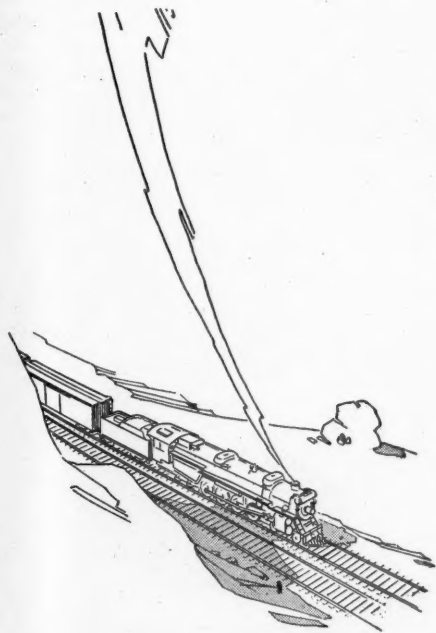
**TO
SAVE
FUEL**

To show its full effectiveness as a fuel saver the firebox brick arch must be designed for the class of power in which it is to work.

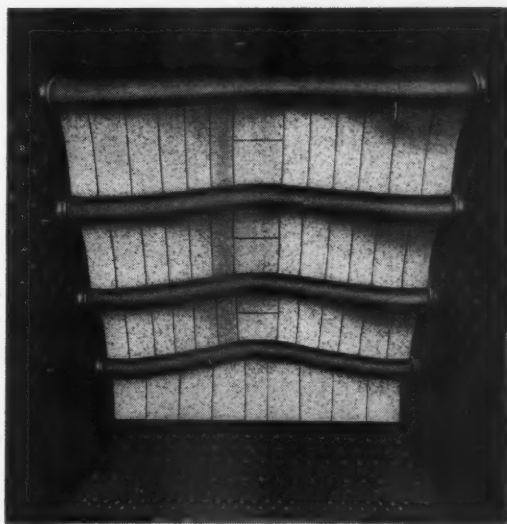
Firebox designs are different and for full effectiveness the brick arch must be designed accordingly.

The Security Sectional Brick Arch is the result of many years of engineering and experience in locomotive operation, in studies of combustion and in the making of refractory brick.

Arch Company engineers over a period of many years have gained and applied a knowledge and experience nowhere else available. This knowledge and experience means many thousands of dollars each year in reduced fuel costs to the railroads of this country.

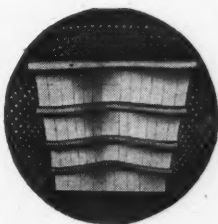


*There's More to
SECURITY ARCHES
Than Just Brick*



**HARRISON-WALKER
REFRACTORIES CO.**

Refractory Specialists



**AMERICAN ARCH CO.
INCORPORATED**

60 EAST 42nd STREET, NEW YORK, N. Y.

*Locomotive Combustion
Specialists*

Southern, as reported in the *Railway Age* of November 15. Mr. Horner will be editor of the employees' magazine and also have charge of advertising and publicity for the road. Prior to his association with the railroad, Mr. Horner was a member of the reportorial staff of the Roanoke (Va.) World News, served as correspondent for the United Press, and did free lance news-



R. R. Horner

paper work. Entering the service of the Norfolk & Western in 1924 as advertising manager of the magazine, he was appointed publicity assistant four years later, and was promoted to managing editor of the Norfolk & Western magazine on October 1, 1939.

PURCHASES AND STORES

W. F. Dunn has been appointed tie and timber agent of the Southern, with headquarters at Washington, D. C.

J. M. Paulus, general storekeeper of the Nashville, Chattanooga & St. Louis, has been appointed acting purchasing agent, with headquarters as before at Nashville, Tenn., succeeding **J. L. Woods**, who has been granted a leave of absence because of ill health. **C. W. Jones** has been appointed acting general storekeeper, relieving Mr. Paulus.

C. K. Reasor, assistant manager of stores of the Erie, with headquarters at Hornell, N. Y., has been appointed acting manager of stores, taking over the duties of **A. L. Sorensen**, who has been given a leave of absence to work with the Association of American Railroads during the present emergency. **J. H. Geary** has been appointed acting assistant manager of stores.

Alfred N. Laret, assistant to the chief purchasing officer of the St. Louis-San Francisco, has been promoted to assistant chief purchasing officer, with headquarters as before at St. Louis, Mo. Mr. Laret was born at Pittsburg, Kan., on October 11, 1890, and attended business college. He entered railway service in 1906 as a stenographer in the office of the local freight agent of the Frisco at Pittsburg and in January, 1907, he went with the Kansas City Southern as a stenographer in the

general storekeeper's office. In August, 1909, he went with the Atchison, Topeka & Santa Fe as a stenographer in the general stores department at Topeka, Kan., and in December, 1910, he was promoted to secretary to the general storekeeper. Mr. Laret returned to the Frisco on November 15, 1913, as secretary to the chief purchasing officer and in April, 1914, he was promoted to assistant chief clerk. In August, 1915, he was advanced to chief clerk. During the period of Federal control Mr. Laret served as assistant chief clerk to the purchasing agent of the Frisco and the Missouri-Kansas-Texas and at the end of that period he was appointed chief clerk to the vice-president and chief purchasing officer of the Frisco. On June 1, 1922, Mr. Laret was advanced to assistant to the vice-president and chief purchasing officer, his title later being changed to assistant to the chief purchasing officer.

OBITUARY

Mrs. Ina C. Trewin, assistant secretary of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, died at Libertyville, Ill., on January 2.

William Fredrick Kuhlke, superintendent of motive power of the Charleston & Western Carolina, with headquarters at Augusta, Ga., died at his home in that city on December 31.

Walter R. Sedin, general freight agent for the Great Northern, with headquarters at St. Paul, Minn., died on December 28 in that city after a prolonged illness. Mr. Sedin was 50 years old and entered railroad service in 1907 as an office boy on the Great Northern. After several promotions in the traffic department, he was advanced to chief clerk to the general freight agent in 1922 and was promoted to general freight agent in 1935.

Dr. John G. Frost, chief surgeon for the Chicago & Eastern Illinois, the Chicago & Western Indiana and the Belt Railway Company of Chicago, local surgeon at Chicago for the New York Central, associate surgeon at the Illinois Central hospital, senior surgeon at St. Bernard's hospital, Chicago, and chairman of the Cook county (Chicago) coroner's medical advisory board, died on January 2 in the Mercy hospital, Chicago. Dr. Frost was a past president of the American Association of Railway Surgeons.

Harry Hobson, who retired on September 6, 1936, as signal engineer of the Eastern lines of the Atchison, Topeka & Santa Fe, with headquarters at Topeka, Kan., died in that city on December 27. Mr. Hobson was born in County Kildare, Ireland, in 1855. In 1879 he went to New Zealand and spent four years in army service before returning to Ireland. In 1886, he first came to the United States, and about a year later obtained a job as a trucker with the Chicago, Burlington & Quincy in the Chicago freight house. He served the Burlington in various capacities until 1892, when he returned to Ireland and remained for nearly six years. In 1897, Mr. Hobson returned to the United

States and joined the Santa Fe signal department under his brother, J. S. Hobson, who was then signal engineer. Shortly thereafter, he joined the operating department as a locomotive fireman, but soon returned to the signal department as lamp inspector. From this position he progressed to lamp and way-car inspector, general foreman, signal supervisor, Eastern lines, and eventually to signal engineer, Eastern lines, which position he held until his retirement.

Charles Matthew Connor, superintendent transportation of the Western Maryland, with headquarters at Hagerstown, Md., died on December 31, 1941. Mr. Connor was born at Baltimore, Md., on September 5, 1891, and attended Baltimore City College. He entered railroad service in August, 1907, as clerk in the office of the superintendent car service of the Baltimore & Ohio at Baltimore. In January, 1911, Mr. Connor went with the Western Maryland as clerk in the office of the superintendent car service, becoming chief clerk to superintendent transportation at Hagerstown in July, 1918. He was appointed chief clerk to superintendent at Hagerstown in September, 1937, and in April, 1939, he became superintendent transportation, the position he held until his death.

Charles A. Clements, assistant general manager on the Missouri Pacific, with headquarters at St. Louis, Mo., whose death on December 18 was reported in the *Railway Age* of January 3, was born at Brightwood, Ind., on June 13, 1879, and entered railway service in October, 1894, as a ticket clerk on the Illinois Central at Centralia, Ill., later serving successively as yard clerk, brakeman, switchman, conductor, general yardmaster and trainmaster. In September, 1907, he went with the Mis-



Charles A. Clements

souri Pacific as general yardmaster at Little Rock, Ark., and a year later he was promoted to trainmaster. In October, 1918, Mr. Clements was advanced to superintendent of terminals, with headquarters at Kansas City, Mo., and in 1925 he was transferred to St. Louis, Mo. He was further advanced to assistant general manager in charge of yard operations on April 1, 1928, and four years later he was also placed in charge of labor matters.

Table of Revenues and Expenses of Railways Begins on next left-hand page

The Invisible Part is IMPORTANT



Invisible to the eye . . . radio frequency waves make possible today's radio programs.

Invisible to the eye . . . correctly maintained internal surfaces of superheater units make possible efficient cylinder horsepower.

Ordinary repairs . . . with internal restrictions cause a pressure drop and increased cost of cylinder horsepower.

Old superheater units can best be rehabilitated by Elesco . . . using the same process that originally manufactured them. This is a guarantee that invisible and visible surfaces will be like new . . . at a cost about half that of new units.

A-1465



SUPERHEATERS • FEEDWATER HEATERS
AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

THE
SUPERHEATER
C O M P A N Y

Representative of
AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street • NEW YORK
122 S. Michigan Avenue • CHICAGO
Montreal, Canada
THE SUPERHEATER COMPANY, LTD.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1941

Name of road	Av. mileage operated during period	Operating revenues				Operating expenses				Operating ratio	Net from operation	Operating income		Net railway operating income	
		Freight	Passenger	(inc. misc.)	Total	Way and structures	Maintenance of equip-	Traffic	Trans- portation	Total				1941	1940
Akron, Canton & Youngstown.....	Nov. 171	\$242,490	\$43	\$255,947	\$255,947	\$3,034	25,707	16,265	80,933	184,373	72.0	71,574	51,328	34,004	59,087
Akron, Canton & Youngstown.....	11 mos. 171	2,734,328	462	2,734,790	2,734,790	421,488	269,733	165,249	795,763	1,756,886	61.3	1,107,678	818,344	621,320	429,619
Alton.....	Nov. 959	1,220,140	238,365	1,700,507	1,700,507	248,316	258,961	48,425	708,264	1,354,554	79.7	345,597	225,597	35,407	33,810
Alton.....	11 mos. 950	13,098,274	2,720,144	18,236,451	18,236,451	2,274,440	2,774,099	513,012	6,973,267	13,558,013	73.2	4,878,438	3,724,712	1,733,579	152,627
Atchafalaya, Topeka & Santa Fe System.....	Nov. 13,430	16,166,804	1,767,184	19,379,134	19,379,134	2,649,767	3,814,292	510,628	6,954,158	14,338,503	74.0	5,040,631	2,766,273	2,877,586	2,834,966
Atchafalaya, Topeka & Santa Fe System.....	11 mos. 13,430	167,903,676	20,558,186	208,585,571	208,585,571	26,048,707	39,447,335	5,247,298	66,583,807	141,635,033	69.6	61,950,538	36,303,798	36,303,095	20,585,959
Atlanta & West Point.....	Nov. 93	1,637,269	344,687	2,258,758	2,258,758	217,231	324,151	97,705	843,807	1,604,597	71.8	634,161	399,291	222,170	10,418
Atlanta & West Point.....	11 mos. 93	16,913	36,570	226,541	226,541	31,628	34,903	8,490	77,173	161,026	71.1	65,515	35,062	35,129	25,839
Western of Alabama.....	Nov. 133	1,654,303	330,707	2,330,050	2,330,050	293,741	377,591	91,382	772,732	1,643,693	73.7	586,357	314,375	297,426	158,672
Atlanta, Birmingham & Coast.....	Nov. 639	3,338,611	16,237	3,774,651	3,774,651	48,735	50,023	24,702	168,187	305,650	81.6	69,001	24,880	14,486	10,266
Atlanta, Birmingham & Coast.....	11 mos. 639	37,338,464	298,998	4,269,931	4,269,931	549,573	646,499	271,813	1,679,597	3,314,808	77.6	955,123	573,447	221,936	225,087
Atlantic Coast Line.....	Nov. 5,086	4,257,984	781,633	5,488,183	5,488,183	465,232	1,164,473	170,307	2,067,272	4,070,932	74.2	1,417,251	717,251	670,891	704,831
Atlantic Coast Line.....	11 mos. 5,086	45,154,324	10,629,338	60,951,878	60,951,878	5,312,676	11,046,642	1,813,102	21,552,208	42,153,806	69.2	18,798,072	12,048,072	10,347,885	2,672,261
Charleston & Western Carolina.....	Nov. 343	2,627,388	2,698	2,753,334	2,753,334	30,503	31,641	10,219	89,638	183,903	68.6	1,227,552	772,552	730,602	372,177
Charleston & Western Carolina.....	11 mos. 343	3,010,311	30,315	3,103,319	3,103,319	323,803	444,451	105,401	932,638	1,875,767	60.4	1,227,552	772,552	730,602	372,177
Baltimore & Ohio.....	Nov. 6,368	17,952,293	1,135,083	20,046,979	20,046,979	1,930,992	4,882,940	454,005	6,069,471	14,915,152	74.4	5,131,827	3,410,304	2,883,373	3,321,470
Baltimore & Ohio.....	11 mos. 6,374	185,189,237	12,537,445	208,349,163	208,349,163	19,227,506	47,352,131	4,754,008	67,068,056	145,907,490	70.0	62,441,673	48,480,277	44,385,115	27,801,780
Staten Island Rapid Transit.....	Nov. 24	63,665	769,202	1,632,141	1,632,141	146,956	247,646	12,261	882,975	1,417,008	86.8	215,133	76,639	166,463	262,789
Staten Island Rapid Transit.....	11 mos. 24	755,779	7,230	19,217,451	19,217,451	1,311,803	4,443,541	136,752	2,815,152	9,083,119	47.3	10,134,332	6,412,296	7,347,282	7,080,876
Bangor & Aroostook.....	Nov. 603	419,198	21,958	463,654	463,654	78,608	82,065	5,832	144,197	337,071	72.7	126,583	70,476	91,303	36,010
Bangor & Aroostook.....	11 mos. 603	4,682,387	223,719	5,133,933	5,133,933	908,643	956,693	60,825	1,357,436	3,333,341	68.8	1,600,332	960,224	1,192,153	700,392
Bessemer & Lake Erie.....	Nov. 216	1,632,408	523	1,666,003	1,666,003	81,632	420,528	11,355	258,891	808,966	48.6	857,037	550,035	613,931	839,188
Bessemer & Lake Erie.....	11 mos. 217	19,069,846	7,230	19,217,451	19,217,451	1,311,803	4,443,541	136,752	2,815,152	9,083,119	47.3	10,134,332	6,412,296	7,347,282	7,080,876
Boston & Maine.....	Nov. 1,906	3,644,365	554,272	4,766,899	4,766,899	661,288	818,620	68,620	1,895,347	3,681,893	77.2	1,085,006	738,103	468,188	726,101
Boston & Maine.....	11 mos. 1,906	40,788,735	7,470,967	53,912,734	53,912,734	6,777,554	7,698,809	740,422	19,185,574	36,410,234	67.5	17,502,469	12,094,556	9,024,403	6,104,715
Burlington, Rock Island.....	Nov. 253	776,053	239,285	1,108,352	1,108,352	184,463	168,698	45,496	477,449	989,458	89.3	118,894	17,491	35,448	122,109
Burlington, Rock Island.....	11 mos. 253	7,760,553	2,392,855	10,153,408	10,153,408	1,844,622	2,324,461	2,324	46,122	989,458	89.3	118,894	17,491	35,448	122,109
Cambria & Indiana.....	Nov. 37	140,662	.....	140,662	140,662	10,628	60,364	389	14,726	92,165	65.48	48,585	23,708	45,035	93,664
Cambria & Indiana.....	11 mos. 37	1,704,448	.....	1,704,448	1,704,448	113,516	664,973	4,775	159,784	1,011,836	59.32	693,804	64,892	796,408	899,155
Canadian Pacific Lines in Maine.....	Nov. 234	2,907,712	200,018	3,274,603	3,274,603	444,021	603,187	73,274	1,149,127	2,335,035	71.3	939,568	777,518	521,460	439,474
Canadian Pacific Lines in Maine.....	11 mos. 234	29,077,122	2,001,018	32,744,603	32,744,603	4,440,021	6,031,877	732,274	1,149,127	2,335,035	71.3	939,568	777,518	521,460	439,474
Canadian Pacific Lines in Vermont.....	Nov. 91	73,743	5,046	89,410	89,410	15,795	23,535	2,291	83,150	127,890	143.0	38,480	48,042	73,420	56,034
Canadian Pacific Lines in Vermont.....	11 mos. 91	1,055,781	82,818	1,255,781	1,255,781	213,491	255,094	24,665	832,310	1,359,613	108.2	103,832	186,458	438,333	431,562
Central of Georgia.....	Nov. 1,863	16,534,044	1,870,202	20,127,680	20,127,680	2,172,913	3,418,759	618,361	7,378,985	14,522,857	72.2	5,604,823	4,124,215	3,867,512	533,857
Central of Georgia.....	11 mos. 1,863	165,340,444	18,702,202	201,276,802	201,276,802	21,729,913	34,187,759	6,183,361	7,378,985	14,522,857	72.2	5,604,823	4,124,215	3,867,512	533,857
Central of New Jersey.....	Nov. 661	2,854,585	354,085	3,401,411	3,401,411	462,717	761,608	47,319	1,579,945	2,983,592	87.7	417,819	349,346	210,657	83,072
Central of New Jersey.....	11 mos. 661	33,077,605	4,223,890	39,690,684	39,690,684	3,980,207	8,154,631	516,676	15,604,266	29,369,556	74.0	10,320,728	6,750,826	4,704,136	1,063,004
Central Vermont.....	Nov. 422	6,375,309	374,599	7,196,317	7,196,317	875,919	1,062,305	125,934	2,768,404	5,041,925	70.1	2,154,392	1,843,259	1,326,658	628,476
Central Vermont.....	11 mos. 422	63,753,309	3,745,599	71,963,317	71,963,317	8,759,919	10,623,305	1,259,934	27,684,044	50,419,255	70.1	2,154,392	1,843,259	1,326,658	628,476
Chesapeake & Ohio.....	Nov. 3,124	12,328,615	420,287	13,254,350	13,254,350	1,271,920	2,241,035	222,818	3,236,024	7,293,522	55.0	5,960,828	6,296,912	6,384,315	3,463,653
Chesapeake & Ohio.....	11 mos. 3,124	128,965,333	4,326,334	138,084,265	138,084,265	13,132,920	23,131,954	2,328,772	31,018,060	72,997,166	52.9	63,987,099	44,221,888	45,272,707	37,427,291
Chicago & Eastern Illinois.....	Nov. 925	1,265,943	159,716	1,583,890	1,583,890	172,850	297,164	63,698	1,644,773	12,504,881	73.8	4,436,140	3,170,640	1,748,481	715,188
Chicago & Eastern Illinois.....	11 mos. 925	13,233,866	1,864,183	16,941,021	16,941,021	1,939,882	3,006,345	640,291	6,164,773	12,504,881	73.8	4,436,140	3,170,640	1,748,481	715,188
Chicago & Illinois Midland.....	Nov. 131	403,168	633	427,140	427,140	67,445	80,578	22,545	112,047	303,114	71.0	124,026	118,297	106,157	132,883
Chicago & Illinois Midland.....	11 mos. 131	4,646,660	7,027	4,653,687	4,653,687	730,704	722,912	238,096	1,106,574	2,920,687	59.9	1,955,052	1,065,689	980,801	1,083,921
Chicago & North Western.....	Nov. 8,306	79,305,299	11,570,390	100,445,382	100,445,382	12,813,331	18,278,199	2,184,099	36,166,415	73,140,251	72.8	27,305,131	18,797,066	16,055,076	8,525,076
Chicago & North Western.....	11 mos. 8,306	793,305,299	115,703,390	1,009,045,382	1,009,045,382	128,133,331	182,781,999	2,184,099	36,166,415	73,140,251	72.8	27,305,131	18,797,066	16,055,076	8,525,076
Chicago, Burlington & Quincy.....	Nov. 9,102	8,194,350	915,281	9,995,800	9,995,800	1,685,154	1,833,314	252,129	3,686,161	7,773,228	77.8	2,222,572	1,392,312	1,145,673	1,739,579
Chicago, Burlington & Quincy.....	11 mos. 9,102	86,551,472	10,442,216	106,993,688	106,993,688	15,009,739	17,442,821	2,746,501	35,589,394	74,266,405	69.5	32,660,811	20,759,460	17,673,328	11,723,348
Chicago Great Western.....	Nov. 1,502	1,586,868	41,321	1,775,679	1,775,679	181,031	196,228	60,162	664,767	1,167,813	66.5	587,866	420,198	235,183	350,576
Chicago Great Western.....	11 mos. 1,502	17,724,543	537,939	19,571,663	19,571,663	2,145,286	2,611,288	670,051	6,779,160	12,840,851	65.6	6,730,812	4,859,825	2,726,007	1,416,370
Chicago, Indianapolis & Louisville.....	Nov. 549	856,267	27,910	948,578	948,578	88,224	149,400	27,238	289,855	585,471	61.7	363,107	321,954	244,106	106,081
Chicago, Indianapolis & Louisville.....	11 mos. 549	8,654,945	373,078	9,884,288	9,884,288	979,746	1,652,629	300,522	3,132,205	6,408,255	65.1	3,436,033	2,958,819	1,996,442	1,090,900

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1941—CONTINUED

MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1941—CONTINUED											12, No. 2			
Name of road	Av. mileage operated during period	Operating revenues				Operating expenses				Operating ratio	Net from operation	Net railway operating income		
		Freight	Passenger	(inc. misc.)	Total	Way and structures	Maintenance of equipment	Traffic	Transportation			Operating income	1941	1940
Chicago, Milwaukee, St. Paul & Pacific	10,821	\$9,630,973	\$726,397	\$11,369,041	\$21,726,411	\$1,649,518	\$2,128,264	\$237,240	\$4,200,552	76.3	\$2,697,899	\$1,917,899	\$1,563,234	\$1,609,382
Chicago, Milwaukee, St. Paul & Pacific	10,848	106,860,297	8,637,931	127,113,731	18,505,367	18,505,367	20,460,386	2,562,463	42,378,291	69.6	38,647,406	30,204,406	26,119,029	11,962,587
Chicago, Milwaukee, St. Paul & Pacific	7,950	6,245,694	846,950	7,634,168	1,090,860	1,090,860	1,472,971	305,147	3,044,318	82.0	1,372,401	881,120	585,011	760,925
Chicago, Rock Island & Pacific	7,955	72,369,350	9,740,812	88,366,731	11,629,907	11,629,907	14,444,736	3,029,261	30,061,514	71.1	25,577,270	20,147,950	16,232,393	6,900,642
Chicago, St. Paul, Minneapolis & Omaha	1,629	1,454,900	123,219	1,689,254	210,855	210,855	288,367	43,833	786,956	82.7	292,925	172,880	69,847	73,679
Chicago, St. Paul, Minneapolis & Omaha	1,629	15,332,676	1,497,906	18,286,484	2,933,152	2,933,152	445,797	445,797	7,746,683	77.9	4,034,299	2,717,192	1,457,359	286,407
Clinchfield Railroad	308	9,976,060	3,735	916,923	50,229	50,229	171,466	22,371	194,659	50.1	5,896,267	4,816,426	4,926,972	3,270,098
Clinchfield Railroad	308	9,976,060	52,952	10,094,923	512,670	512,670	1,423,807	220,990	1,843,522	41.6	5,896,267	4,816,426	4,926,972	3,270,098
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
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Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
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Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
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Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
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Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
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Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49,164	116,575
Colorado & Southern	755	576,235	52,807	687,171	62,883	62,883	151,426	14,706	285,912	79.6	140,459	72,921	49	

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MORE *high speed*



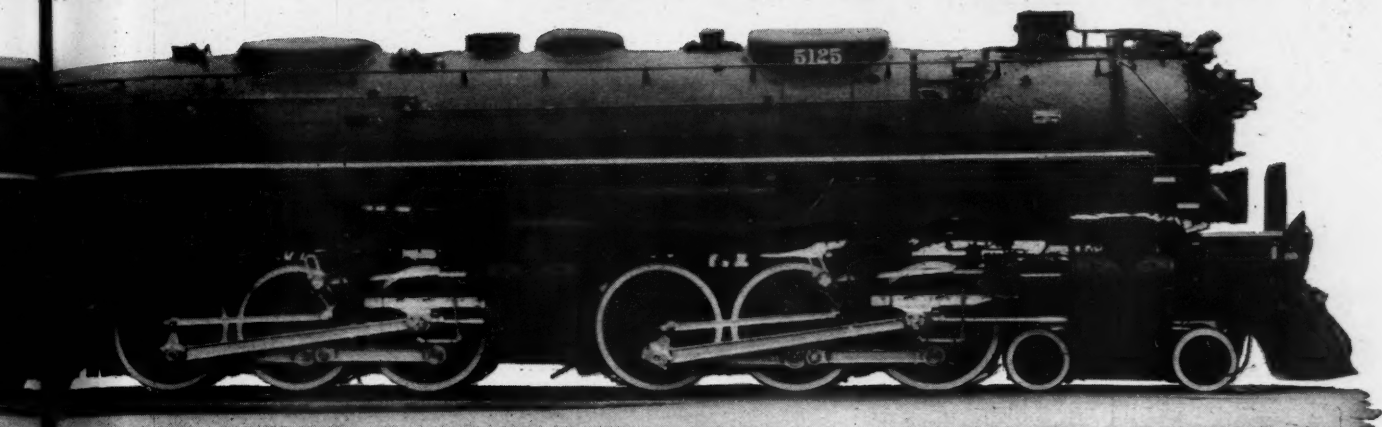
Alco



on the "Main S"



freight **POWER**



"Main Street of the Northwest"

SIX new 4-6-6-4 type single-expansion articulated high-speed freight locomotives have been added to strengthen and speed up the service on the Northern Pacific—"The Main Street of the Northwest." These new locomotives are almost duplicates of the twelve 4-6-6-4's built by the American Locomotive Company and delivered to the Northern Pacific late in 1936.

These modern high-speed, high-powered freight locomotives are handling freight trains at what, only a few years back, would have been considered very good fast passenger train schedules. Overall the new power provides a far better operating ratio for the railroad, and faster and more efficient service to shippers.

NORTHERN PACIFIC 4-6-6-4 TYPE LOCOMOTIVE CHARACTERISTICS

Weight on Drivers.....	444,000 lb.
Weight of Engine.....	643,000 lb.
Cylinders (Four).....	23x32 inches
Diameter of Drivers.....	70 inches
Boiler Pressure.....	260 lb.
Tractive Power.....	106,900 lb.
Tender Capacity — Fuel.....	27 Tons
Water.....	25,000 Gals.

AMERICAN LOCOMOTIVE COMPANY

30 CHURCH STREET

NEW YORK, N. Y.

REVENUES AND EXPENSES OF RAILWAYS

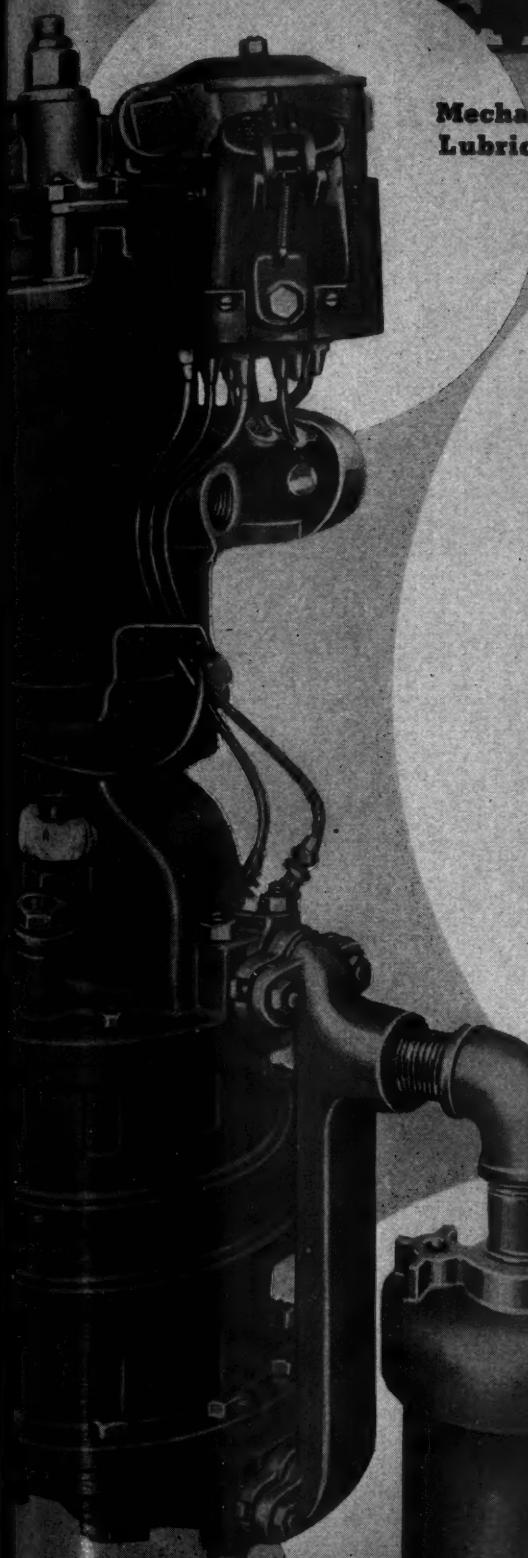
MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1941—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Maintenance of way and structures	Traffic	Trans- portation			1941	1940
Gulf, Mobile & Ohio	Nov. 1,973	\$1,934,011	\$48,716	\$2,063,459	\$321,155	\$86,238	\$1,777,447	66.8	\$686,012	\$451,247	\$201,102
	11 mos.	10,243,266	540,029	10,783,295	3,022,560	934,836	7,848,251	66.3	7,290,848	4,788,041	1,351,229
	Nov.	9,027,851	918,439	10,581,518	1,182,633	2,083,310	3,975,843	77.9	2,341,162	1,353,177	1,769,414
Illinois Central	Nov. 4,951	92,987,339	10,203,383	110,816,451	12,406,290	2,308,167	37,731,627	72.7	30,207,598	19,313,820	12,285,683
	11 mos.	1,825,930	91,416	2,012,146	258,566	32,078	1,779,416	58.6	832,730	679,155	307,883
	Nov.	16,229,893	806,164	18,075,818	1,615,157	357,314	11,596,665	64.2	6,470,153	4,813,109	1,783,876
Yazoo & Mississippi Valley	Nov. 6,521	10,853,781	1,009,855	12,593,664	1,324,312	240,388	4,665,183	71.5	3,173,892	2,038,379	1,851,675
	11 mos.	109,217,232	11,099,547	128,892,269	14,021,447	2,665,481	44,157,381	74.8	36,686,751	24,095,454	23,035,556
Illinois Central System	Nov. 6,531	109,217,232	11,099,547	128,892,269	14,021,447	2,665,481	44,157,381	74.8	36,686,751	24,095,454	23,035,556
	11 mos.	460,823	72,462	593,832	62,045	21,942	230,780	72.93	160,723	108,725	87,976
Illinois Terminal	Nov. 476	5,059,718	725,353	6,436,207	635,683	199,142	2,026,147	60.66	2,532,070	1,705,450	1,445,378
	11 mos.	1,598,368	64,575	1,792,490	210,643	66,105	524,109	65.8	612,355	392,355	264,600
Kansas City Southern	Nov. 879	15,160,163	777,858	17,368,623	2,029,618	635,482	4,853,588	62.9	6,442,643	4,845,643	3,794,001
	11 mos.	209,819	464	212,598	18,784	8,918	48,269	43.7	119,676	76,841	57,848
Kansas, Oklahoma & Gulf	Nov. 328	2,533,716	4,693	2,285,147	194,142	97,007	496,382	44.6	1,266,944	946,031	751,810
	11 mos.	2,317,689	40	386,276	28,122	552	61,193	34.0	255,054	161,837	166,976
Lake Superior & Ishpeming	Nov. 156	2,922,000	620	3,545,930	325,205	7,054	551,219	37.3	2,223,145	1,096,562	1,143,632
	11 mos.	189,674	.....	190,217	22,812	4,629	56,268	60.4	75,233	60,266	46,028
Lehigh & Hudson River	Nov. 96	2,034,003	.....	2,034,003	299,220	44,762	563,712	59.7	824,636	506,630	370,155
	11 mos.	417,840	.....	420,375	33,838	9,389	139,210	58.9	132,125	77,415	82,286
Lehigh & New England	Nov. 190	4,842,761	.....	4,842,761	368,598	83,333	1,431,600	68.6	2,004,624	1,287,739	1,307,803
	11 mos.	4,517,298	170,910	4,935,991	419,741	108,746	2,120,742	73.7	1,300,166	798,497	522,513
Lehigh Valley	Nov. 1,268	47,256,662	1,911,326	51,922,469	4,266,972	1,167,874	19,864,568	67.5	16,877,544	12,212,413	9,621,195
	11 mos.	842,614	34,025	915,531	109,871	31,411	239,766	58.0	384,925	327,058	255,094
Louisiana & Arkansas	Nov. 881	8,867,633	338,610	9,598,137	1,458,284	332,581	2,364,079	59.0	3,937,437	2,975,718	2,218,681
	11 mos.	8,880,081	811,587	10,186,529	988,045	194,706	3,188,313	69.0	3,153,143	1,850,803	2,062,735
Louisville & Nashville	Nov. 4,803	94,748,401	7,943,302	108,583,882	10,374,806	2,029,898	33,588,621	65.0	37,977,499	21,951,629	15,445,928
	11 mos.	981,632	87,652	1,152,518	184,617	12,069	428,863	81.9	209,047	116,802	83,089
Maine Central	Nov. 991	11,389,107	1,026,473	13,457,971	1,855,721	128,966	4,544,508	69.1	4,150,880	2,934,966	2,466,623
	11 mos.	128,398	3	130,868	12,539	2,469	35,510	49.1	66,610	53,643	40,072
Midland Valley	Nov. 352	1,320,242	53	1,348,166	153,487	26,645	355,329	51.9	648,092	522,838	413,541
	11 mos.	820,897	7,779	864,804	58,421	58,421	326,934	81.8	137,049	96,098	68,394
Minneapolis & St. Louis	Nov. 1,409	9,368,757	106,951	9,876,934	1,729,552	566,293	3,246,951	75.9	2,381,688	1,805,114	1,373,168
	11 mos.	2,673,352	60,211	2,912,011	476,428	65,140	1,186,963	80.2	575,714	441,139	358,167
Minneapolis, St. Paul & Sault Ste. Marie	Nov. 4,271	30,104,473	890,993	33,256,036	5,087,600	712,716	12,005,594	71.4	9,520,523	6,761,322	5,699,302
	11 mos.	291,819	6,868	322,217	45,225	8,104	107,728	67.1	106,096	89,770	90,120
Duluth, South Shore & Atlantic	Nov. 550	2,817,066	82,667	3,148,011	624,160	81,814	1,032,506	72.4	867,593	689,011	647,689
	11 mos.	71,588	464	78,396	15,093	2,731	25,328	72.1	21,887	16,597	11,925
Spokane International	Nov. 152	794,843	6,801	878,532	185,465	25,497	255,946	66.7	292,871	238,721	191,952
	11 mos.	86,416	398	87,639	18,399	8,362	22,700	74.8	25,837	16,443	10,381
Mississippi Central	Nov. 138	1,043,419	22,847	1,080,792	272,575	86,517	245,715	72.2	300,519	223,702	155,529
	11 mos.	100,432	1,719	108,740	29,402	9,988	43,234	93.6	6,917	16,761	12,728
Missouri & Arkansas	Nov. 365	1,144,623	16,402	1,241,107	306,687	85,853	411,566	81.1	234,775	167,761	48,292
	11 mos.	235,391	191	236,667	38,018	3,413	56,840	54.5	107,718	52,664	40,548
Missouri-Illinois	Nov. 193	2,425,337	2,122	2,446,672	349,632	35,573	580,737	52.2	1,168,790	712,737	558,295
	11 mos.	2,456,322	230,983	2,921,753	480,572	146,761	1,275,689	95.8	122,475	113,397	374,614
Missouri-Kansas-Texas Lines	Nov. 3,293	26,507,143	2,445,225	31,637,735	4,424,904	1,116,435	22,949,101	74.4	8,092,821	5,758,106	3,348,103
	11 mos.	8,328,540	675,314	9,769,635	1,460,445	283,269	3,449,876	73.6	1,812,016	1,423,853	1,190,252
Missouri Pacific	Nov. 7,142	86,148,769	7,247,242	101,650,499	13,706,632	2,767,884	32,896,493	68.5	32,035,605	25,244,078	20,997,853
	11 mos.	1,673,300	63,254	1,807,216	243,833	50,152	521,068	60.69	710,390	625,839	485,980
Gulf Coast Lines	Nov. 1,772	14,563,778	572,656	15,943,908	2,300,710	494,740	4,834,301	65.46	5,507,576	4,637,946	3,457,067
	11 mos.	1,032,070	93,977	1,245,118	212,145	32,051	1,020,857	82.0	224,261	177,434	95,524
International Great Northern	Nov. 1,155	10,372,700	1,049,922	12,760,426	1,980,826	325,568	4,887,074	79.0	2,685,811	1,967,626	1,215,765
	11 mos.	496,460	519	499,288	52,468	866	112,097	40.2	298,599	241,995	154,046
Monongahela	Nov. 172	5,555,040	6,297	5,386,071	461,341	5,866	1,162,386	37.6	3,360,195	2,746,951	1,805,764

Continued on next left-hand page

A Way to Increase . . .

LOCOMOTIVE AVAILABILITY



**Mechanical
Lubricator**

Keep Compressors Functioning by Proper Lubrication and Clean Air

One important means of preventing layovers or premature shopping of locomotives is reliable air compressor performance. This can be realized by correct lubrication and cleaned intake air. Moving parts are thus kept working freely, air passages open, valves tight. Such desirable conditions are assured by use of our Mechanical Lubricator, which supplies oil consistently in restricted quantities, and our Suction Filter, which intercepts even the finest dust * Many railroads have proved this to their satisfaction and profit. On record are a host of cases in which compressors have functioned with absolute dependability throughout the entire time between scheduled locomotive shoppings. Even then they were found to be clean, and could be reconditioned at much less cost than formerly * These devices can help to maintain the availability of *your* motive power as well.



**WESTINGHOUSE
AIR BRAKE CO.**



Suction Filter

WILMERDING, PENNSYLVANIA

REVENUES AND EXPENSES OF RAILWAYS

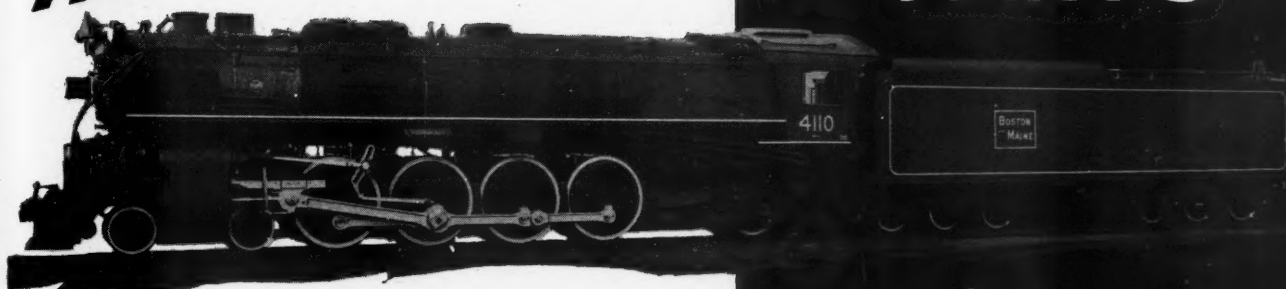
MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1941—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues				Operating expenses			Operating ratio	Net from railway operation	Net railway operating income	
		Freight	Passenger	(inc. misc.)	Total	Maintenance of way and structures	Traffic	Trans- portation			1941	1940
Montour	51 Nov.	\$208,498	.....	\$209,941	\$49,213	\$21,819	\$704	\$51,779	64.6	\$74,260	\$30,653	\$60,806
Nashville, Chattanooga & St. Louis	51 11 mos.	2,207,207	121,657	2,222,148	505,344	144,154	7,991	528,247	56.9	1,264,894	957,254	847,725
	1,111 Nov.	1,457,099	17,949,196	1,722,482	325,960	138,920	82,826	763,922	80.3	335,882	207,522	223,760
	1,111 11 mos.	14,767,873	1,492,006	17,949,196	3,021,739	1,753,997	773,554	6,612,438	72.1	4,970,411	3,313,146	1,705,494
Nevada Northern	165 Nov.	56,306	477	59,388	2,355	109,165	14,278	115,204	37.5	37,122	32,161	33,729
	165 11 mos.	592,054	6,331	642,597	34,796	109,165	14,278	115,204	53.5	298,508	160,054	181,781
	10,939 Nov.	28,899,164	5,246,854	37,655,866	3,902,107	8,306,247	566,066	15,054,811	57.0	8,307,776	5,295,190	3,990,829
	10,941 11 mos.	306,716,263	59,267,191	406,473,348	45,413,244	83,356,278	6,107,106	146,320,781	72.9	110,134,885	67,804,506	53,681,487
Pittsburgh & Lake Erie	232 Nov.	2,467,175	46,883	2,573,680	222,920	854,949	38,743	778,027	77.2	386,726	88,548	555,214
	232 11 mos.	26,228,904	500,490	27,454,706	2,385,669	8,549,797	409,020	7,674,590	72.7	7,492,426	2,427,170	6,636,558
	1,702 Nov.	5,052,601	56,797	5,226,094	492,250	711,114	131,599	1,778,272	62.1	1,979,965	2,223,431	1,839,459
	1,703 11 mos.	52,668,435	818,008	54,819,859	4,833,361	7,088,214	1,360,863	17,036,248	57.9	23,088,872	19,176,437	15,426,351
New York, New Haven & Hartford	1,842 Nov.	5,665,432	2,512,184	8,744,029	1,064,054	1,509,193	146,707	3,437,278	74.2	2,291,551	1,804,551	1,052,267
	1,849 11 mos.	61,378,208	27,867,915	97,683,032	11,566,753	15,284,105	1,352,301	34,956,315	69.3	30,025,971	22,980,721	14,760,646
	21 Nov.	223,911	.....	223,911	61,262	10,840	.....	47,115	52.5	108,909	66,648	82,904
	21 11 mos.	3,889,958	.....	4,009,069	572,152	115,186	.....	406,870	27.7	2,899,363	2,400,193	2,723,922
New York, Ontario & Western	547 Nov.	402,223	2,990	449,214	54,159	130,767	18,770	288,902	105.2	23,187	54,534	91,076
	573 11 mos.	4,828,512	344,141	5,702,523	583,308	1,181,119	197,267	2,886,900	88.9	632,035	168,084	216,373
	132 Nov.	264,084	297,084	561,168	31,153	32,578	2,355	138,430	72.3	82,384	48,685	5,377
	127 11 mos.	2,922,994	297,062	3,377,863	255,379	298,113	29,467	1,312,483	59.5	1,368,525	1,037,619	633,731
Norfolk & Western	2,186 Nov.	10,007,772	249,673	10,496,977	1,140,756	1,828,017	164,548	2,284,040	53.7	4,862,639	1,160,258	1,738,212
	2,189 11 mos.	104,447,579	3,344,635	110,601,248	11,169,028	12,033,264	1,688,644	24,521,489	53.2	51,780,851	22,843,157	27,035,704
	733 Nov.	431,923	4,642	432,344	83,630	62,296	26,937	170,478	80.0	90,454	55,212	34,352
	733 11 mos.	4,888,846	57,910	5,101,143	881,328	642,227	277,569	1,758,219	74.2	1,317,644	952,723	705,327
Norfolk Southern	6,889 Nov.	6,816,001	325,800	7,696,100	1,051,762	1,757,439	177,481	2,555,407	76.6	1,801,262	984,038	1,328,764
	6,748 11 mos.	67,377,262	3,974,610	77,258,816	9,258,299	14,639,981	1,914,338	24,176,238	69.6	23,480,886	14,972,659	18,617,205
	345 Nov.	241,776	7,908	266,282	83,748	51,306	2,485	134,964	111.5	30,750	59,680	64,518
	331 11 mos.	2,943,791	116,535	3,258,459	740,829	548,965	28,502	1,415,819	91.2	286,332	73,126	107,157
Oklahoma City-Ada-Atoka	132 Nov.	30,248	.....	30,810	14,237	1,487	710	13,593	102.5	759	4,617	10,799
	132 11 mos.	290,019	295,224	585,243	70,621	10,260	7,714	101,205	69.1	91,141	61,903	15,579
	10,235 Nov.	41,374,757	7,680,865	53,146,783	6,201,547	11,992,151	761,905	19,821,915	75.9	12,817,766	7,363,043	6,337,728
	10,243 11 mos.	435,626,688	79,867,788	539,261,250	60,841,630	123,526,862	8,154,382	193,884,105	71.9	157,368,757	93,682,328	86,552,371
Long Island	379 Nov.	732,714	1,246,021	2,085,748	270,963	341,072	10,699	1,037,781	81.9	376,993	106,682	81,004
	379 11 mos.	8,257,563	15,202,977	24,708,079	2,595,193	3,883,410	106,472	11,004,435	73.2	6,625,572	2,702,571	753,966
	406 Nov.	393,121	100,010	514,787	89,546	96,309	6,226	325,878	103.8	19,445	94,127	185,575
	410 11 mos.	4,169,863	2,615,285	7,103,608	991,062	1,042,426	84,470	3,672,050	84.0	1,139,162	79,027	1,108,505
Pennsylvania-Reading Seashore Lines	2,087 Nov.	2,990,724	74,190	3,205,804	611,044	67,872	1,226,340	2,479,116	77.3	726,688	554,827	495,110
	2,101 11 mos.	32,906,950	989,412	35,814,667	4,510,896	6,824,466	733,246	12,509,796	71.9	10,069,439	6,854,411	5,743,907
	98 Nov.	101,731	.....	102,873	19,156	202,154	1,987	22,884	58.3	42,884	39,540	34,751
	98 11 mos.	955,773	.....	961,346	139,582	180,980	20,082	239,924	67.1	315,845	284,328	220,265
Pittsburgh & Shawmut	136 Nov.	441,659	.....	460,362	25,164	86,817	18,109	96,601	57.0	198,024	186,249	189,727
	136 11 mos.	4,635,747	496	4,849,937	792,910	847,489	205,892	997,332	64.1	1,741,361	1,427,343	1,481,695
	190 Nov.	121,858	.....	123,391	16,855	24,067	1,024	43,295	74.0	33,074	25,505	33,776
	190 11 mos.	1,396,901	.....	1,409,439	180,980	226,910	11,883	471,119	67.7	454,493	386,581	271,792
Pittsburgh & West Virginia	1,431 Nov.	5,966,760	299,047	6,560,858	606,274	1,342,459	73,119	2,538,169	72.1	1,832,813	1,192,898	1,012,873
	1,436 11 mos.	66,134,383	3,268,197	72,566,637	5,875,045	14,632,651	776,642	24,384,110	66.0	24,682,098	15,943,742	14,915,347
	118 Nov.	675,995	1,129,975	1,805,970	102,310	182,296	9,618	384,945	64.3	403,330	167,842	113,181
	118 11 mos.	6,901,509	4,253,004	12,488,081	1,102,245	1,847,569	104,937	3,959,838	60.7	4,909,061	2,958,113	2,234,509
Reading	407 Nov.	218,652	20,849	288,279	33,003	65,345	10,081	153,114	94.0	17,154	17,154	854
	407 11 mos.	2,513,445	297,194	3,459,848	400,090	693,647	116,193	1,706,701	87.9	419,926	219,823	232,785
	4,766 Nov.	4,287,411	395,527	5,099,727	574,482	984,965	126,129	1,787,307	71.7	1,482,801	1,103,226	1,132,503
	4,767 11 mos.	45,298,360	4,278,993	53,769,568	6,341,215	10,514,579	1,344,659	18,552,984	72.0	15,076,052	11,321,845	11,558,059
Richmond, Fredericksburg & Potomac	159 Nov.	154,088	1,454	160,667	17,986	13,924	8,136	58,251	64.4	57,155	50,270	27,287
	159 11 mos.	1,641,281	19,862	1,718,517	252,995	166,697	90,326	618,149	69.1	331,416	438,196	154,588
St. Louis, San Francisco & Texas	159 Nov.	154,088	1,454	160,667	17,986	13,924	8,136	58,251	64.4	57,155	50,270	27,287
	159 11 mos.	1,641,281	19,862	1,718,517	252,995	166,697	90,326	618,149	69.1	331,416	438,196	154,588

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*On the Best
of
Modern Power*

H S G I
Wear Resisting
PARTS



THE most convincing evidence of the economical service built into HUNT-SPILLER *Air Furnace* GUN IRON is its performance on modern power.

Naturally, this is the power which is being operated to the utmost limit. However, the increasing service requirements have merely served to emphasize the wear-resisting qualities built into HUNT-SPILLER *Air Furnace* GUN IRON.

The fact that modern power today is equipped with H S G I Wear-Resisting parts is highly significant—it is obvious that every reason must be in the interest of economical operation.

H S G I

Reg. U.S. Trade Mark

Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings
Crosshead Shoes
Hub Liners

Shoes and Wedges
Floating Rod Bushings

Finished Parts

Dunbar Sectional Type Packing
Duplex Sectional Type Packing
for Cylinders and Valves
(Duplex Springs for Above
Sectional Packing)
Cylinder Snap Rings
Valve Rings All Shapes
Light Weight Valves
Cylinder Liners and Pistons
for Diesel Service

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HUNT-SPILLER
GUN IRON

Air Furnace

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1941—CONTINUED

MONTH OF NOVEMBER AND ELEVEN MONTHS OF CALENDAR YEAR 1941—CONTINUED												
Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from operation	Net railway operating income		
		Freight	Passenger	Total (inc. misc.)	Maintenance of way and structures	Equipment	Traffic			Trans- portation	Total	Operating income	1941	1940
St. Louis Southwestern Lines	Nov. 11 mos.	1,617 \$2,456,232	\$46,186	\$2,584,124	\$587,761	\$433,018	\$122,890	\$778,696	\$2,050,491	\$393,303	\$268,899	\$276,908
	Nov. 11 mos.	1,622 24,094,845	578,274	25,515,606	3,719,081	3,391,605	977,622	6,798,788	15,825,262	976,082	6,094,453	2,457,056
	Nov. 11 mos.	4,307 4,439,200	797,683	5,622,455	864,348	1,136,459	190,232	2,037,677	4,488,972	10,515,735	8,918,414	3,380,141
Seaboard Air Line	Nov. 11 mos.	4,310 43,563,868	9,843,390	57,961,222	7,742,407	11,060,467	2,079,212	20,273,884	43,862,987	14,098,235	8,918,414	3,380,141
	Nov. 11 mos.	6,521 10,399,993	1,178,792	12,373,955	1,192,186	2,209,513	199,925	3,894,274	7,897,721	3,073,670	2,835,732	2,454,466
	Nov. 11 mos.	6,559 105,998,527	12,633,877	126,840,144	13,165,182	21,267,885	2,004,762	39,153,488	79,650,009	32,315,543	29,534,992	18,573,995
	Nov. 11 mos.	315 884,758	90,675	1,034,737	101,667	181,760	18,536	2,758,756	6,220,262	3,815,435	2,167,474	1,513,894
Alabama Great Southern	Nov. 11 mos.	315 8,306,754	1,109,480	10,035,697	1,014,533	1,959,436	185,981	2,758,756	6,220,262	2,219,315	2,167,474	1,513,894
	Nov. 11 mos.	337 1,745,640	126,802	1,969,364	138,081	432,506	33,972	488,775	1,157,458	530,408	546,649	369,733
	Nov. 11 mos.	337 18,010,850	1,646,700	20,618,634	1,921,196	4,153,310	346,835	4,948,324	12,000,540	5,398,054	5,551,119	4,407,418
	Nov. 11 mos.	398 230,428	25,813	281,739	48,736	47,938	2,388	1,119,185	2,304,884	729,345	470,789	318,722
Georgia Southern & Florida	Nov. 11 mos.	398 2,444,320	500,345	3,300,007	458,928	521,201	26,962	1,119,185	2,304,884	729,345	470,789	318,722
	Nov. 11 mos.	204 451,080	58,240	538,565	47,166	46,441	9,258	136,155	258,983	186,150	140,958	95,596
	Nov. 11 mos.	204 4,129,067	632,482	5,058,377	506,597	442,101	92,984	1,274,166	2,496,741	1,632,745	1,272,798	513,824
	Nov. 11 mos.	8,582 16,643,353	2,030,049	20,015,945	2,591,599	3,701,519	423,905	8,430,396	16,242,560	6,896,805	6,896,805	3,645,739
Southern Pacific	Nov. 11 mos.	8,593 172,686,208	23,360,871	211,320,715	19,736,374	33,929,093	4,190,609	74,270,479	142,423,910	53,554,632	42,884,088	23,307,023
	Nov. 11 mos.	.... Dr. 4,115	199	Dr. 4,696	30,455	1,754	Cr. 218	14,722	56,727	-62,288	-62,288	14,188
	Nov. 11 mos.	.... 4,177,580	54,475	4,458,395	294,075	497,008	92,984	1,116,808	4,250,216	1,231,150	970,703	291,217
	Nov. 11 mos.	4,417 4,710,696	386,292	5,471,730	798,226	916,791	148,277	1,746,346	3,854,130	14,750,059	11,793,261	4,459,606
Texas & New Orleans	Nov. 11 mos.	4,417 46,031,673	4,388,486	54,243,233	6,896,658	8,650,337	1,418,736	16,194,113	35,493,902	17,585	501,051	377,262
	Nov. 11 mos.	939 1,082,888	25,624	1,169,037	177,134	106,775	12,620	445,383	784,397	289,423	175,581	187,704
	Nov. 11 mos.	946 10,997,360	362,553	12,041,594	1,999,808	1,036,487	119,404	3,801,033	7,315,453	3,878,903	2,802,077	1,133,135
	Nov. 11 mos.	286 222,935	3,806	244,197	52,157	48,929	8,416	100,544	233,174	6,862	377,262	263,708
Tennessee Central	Nov. 11 mos.	286 2,475,599	49,633	2,690,755	458,668	421,757	80,105	897,768	1,975,170	501,051	377,262	263,708
	Nov. 11 mos.	1,893 2,588,233	276,655	3,096,318	379,306	524,089	80,013	895,079	2,011,153	775,058	679,685	478,282
	Nov. 11 mos.	1,890 24,111,262	2,905,900	29,489,423	3,246,074	5,385,348	847,821	8,579,390	19,417,601	7,124,810	6,171,599	4,432,914
	Nov. 11 mos.	162 1,094,718	3,089	1,272,094	181,233	128,479	35,550	382,382	807,490	48,743	38,622	13,421
Texas Mexican	Nov. 11 mos.	162 1,094,718	3,089	1,272,094	181,233	128,479	35,550	382,382	807,490	48,743	38,622	13,421
	Nov. 11 mos.	239 2,574,933	22	2,614,414	408,675	178,443	209,213	553,956	13,504,828	581,896	384,286	311,575
	Nov. 11 mos.	239 16,473,707	1,606,622	19,414,658	1,913,461	3,675,236	401,205	6,969,867	13,808,069	5,744,570	4,768,706	3,933,122
Union Pacific System	Nov. 11 mos.	9,878 162,602,438	19,292,264	196,346,539	25,386,256	41,959,079	4,852,922	64,295,997	145,927,789	33,504,554	24,548,240	19,493,870
	Nov. 11 mos.	111 87,400	87,495	14,227	27,468	406	24,795	217,702	71,041	16,454	5,061	21,805
	Nov. 11 mos.	111 816,596	817,557	135,682	279,167	4,900	217,702	683,005	683,005	134,552	58,146	54,496
	Nov. 11 mos.	653 2,227,915	2,572	2,304,704	147,177	468,554	26,314	417,801	1,099,695	1,205,009	804,649	673,051
Virginian	Nov. 11 mos.	653 24,485,695	31,563	25,201,413	1,974,242	4,846,014	284,915	3,852,258	11,393,814	7,269,139	7,799,946	8,789,842
	Nov. 11 mos.	2,409 4,099,768	252,287	4,657,395	501,269	609,679	162,371	1,753,004	3,178,204	1,185,192	887,726	651,785
	Nov. 11 mos.	2,409 46,247,832	2,642,393	52,303,767	6,301,598	7,705,966	1,708,136	18,371,796	35,859,943	12,635,201	9,052,292	3,680,780
Wabash	Nov. 11 mos.	294 360,013	9,917	379,419	34,622	77,730	14,750	721,564	312,691	66,728	45,627	53,441
	Nov. 11 mos.	294 4,182,910	36,991	4,353,093	390,034	774,153	155,778	1,773,794	3,233,766	751,502	604,245	371,230
Ann Arbor	Nov. 11 mos.	294 4,182,910	36,991	4,353,093	390,034	774,153	155,778	1,773,794	3,233,766	751,502	604,245	371,230
	Nov. 11 mos.	859 1,943,815	5,743	2,015,876	243,740	552,963	47,412	552,767	1,461,581	334,295	370,912	475,991
	Nov. 11 mos.	859 20,000,350	88,166	20,804,223	2,474,757	4,629,375	468,145	5,149,849	13,340,135	5,144,088	5,415,632	4,741,918
Western Maryland	Nov. 11 mos.	1,195 2,235,758	54,144	2,332,437	179,564	325,839	66,899	886,099	1,517,206	815,231	426,309	470,047
	Nov. 11 mos.	1,195 20,565,266	690,148	21,705,062	2,388,977	3,353,182	753,160	7,588,922	14,738,785	5,616,080	4,242,210	2,245,173
Western Pacific	Nov. 11 mos.	1,195 20,565,266	690,148	21,705,062	2,388,977	3,353,182	753,160	7,588,922	14,738,785	5,616,080	4,242,210	2,245,173
	Nov. 11 mos.	507 1,704,093	5	1,788,923	209,507	335,577	51,400	549,293	1,200,074	151,191	281,443	279,944
	Nov. 11 mos.	507 18,510,529	40	19,512,855	2,374,681	3,689,016	443,327	5,417,160	12,343,737	2,289,335	3,700,922	4,074,774
Wheeling & Lake Erie	Nov. 11 mos.	507 1,704,093	5	1,788,923	209,507	335,577	51,400	549,293	1,200,074	151,191	281,443	279,944